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CONTROL-M/Desktop

User Guide

Supporting

CONTROL-M/Desktop version 6.2.01
CONTROL-M/Enterprise Manager version 6.2.01

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Before you contact BMC Software, have the following information available so that Customer Support can begin working on your problem immediately:

- product information
  - product name
  - product version (release number)
  - license number and password (trial or permanent)
- operating system and environment information
  - machine type
  - operating system type, version, and service pack or other maintenance level such as PUT or PTF
  - system hardware configuration
  - serial numbers
  - related software (database, application, and communication) including type, version, and service pack or maintenance level
- sequence of events leading to the problem
- commands and options that you used
- messages received (and the time and date that you received them)
  - product error messages
  - messages from the operating system, such as `file system full`
  - messages from related software

Contents

Figures

Tables

About this book

This book is a guide to using CONTROL-M/Desktop on a Microsoft Windows computer.

This guide is divided into the following chapters:

- Chapter 1, "CONTROL-M/Desktop Basics"
  Provides an overview of CONTROL-M/Desktop including its advantages, capabilities, and components. Also describes how to establish communication between CONTROL-M/Desktop and CONTROL-M/EM and the means for transferring job processing definitions between CONTROL-M/Desktop, the CONTROL-M/EM database and CONTROL-M platforms.

- Chapter 2, "Working with drafts in the definition environment"
  Describes how to use the CONTROL-M/Desktop window and the various methods available for loading, filtering and viewing data.

- Chapter 3, "Working with the Job Editing form"
  Describes how to use the Job Editing form to create and update job processing definitions.

- Chapter 4, "Creating and updating multiple jobs"
  Describes how to create and update multiple job processing definitions at one time.

- Chapter 5, "Working with the Group Editing form"
  Describes how to use the Group Editing form to create and update group scheduling table definitions.

- Chapter 6, "Filtering data using collections"
  Describes how to create a subset of job processing definitions for filtered viewing, search and replace techniques and mass updates.

- Chapter 7, "Managing scheduling tables"
  Describes how to use the Scheduling Table Manager to create, modify, force/order, and upload/download scheduling tables

- Chapter 8, "Working with calendars"
  Describes how to use the Calendar Manager to create and update Calendar definitions and how to transfer them to the **CONTROL-M/EM** database.

- Chapter 9, “Defining and scheduling jobs with the CONTROL-M Job Definition Wizard”
  Describes how to run the CONTROL-M Job Definition Wizard to define and schedule jobs.

- Chapter 10, “CONTROL-M definitions and validity checks”
  Describes how CONTROL-M/Desktop checks and validates job processing definitions.

- Chapter 11, “Customization”
  Describes how to set CONTROL-M/Desktop defaults.

- Appendix A, “CONTROL-M/Desktop menus”
  Provides a comprehensive list of all CONTROL-M/Desktop menu options.

- Appendix B, “Managing logon connections to CONTROL-M/EM”
  Describes advanced log in techniques, including changing passwords and switching to different GUI Servers.

NOTE

Various CONTROL-M platforms sometimes use different terminology for CONTROL-M components and parameters. The terminology used in this book may be different than the terminology used for your platform, but each component or parameter referenced is easily recognized.

Related publications

- *CONTROL-M for OS/390 and z/OS User Guide* describes all CONTROL-M concepts, features, facilities and operating instructions in detail. It can be used as a learning guide as well as a reference guide.
- *CONTROL-M Administrator Guides* are supplied based on the type of computer(s) in each site's CONTROL-M installation(s). These guides describe installation, setup, security and utilities that apply to platforms such as iSeries (AS/400) platforms.
- *CONTROL-M/Agent Administrator Guide* describes maintenance of CONTROL-M/Agent on the various types of supported platforms.
- *CONTROL-M/Server Administrator Guide* describes maintenance of CONTROL-M/Server on the various types of supported platforms.
- CONTROL-M/Enterprise Manager *User Guide* describes all CONTROL-M/EM concepts, features, facilities and operating instructions in detail. It can be used as a learning guide as well as a reference guide.
- *CONTROL-M/Enterprise Manager Administrator Guide* describes administrator responsibilities, customization, maintenance, and security of CONTROL-M/EM.
- *CONTROL-M/Enterprise Manager Installation Guide* describes the installation processes for implementing CONTROL-M/EM databases and the CONTROL-M/EM product on Microsoft Windows and Unix platforms.
- *CONTROL-M Job Parameter and Variable Reference Guide* describes the parameters used for creating job processing definitions.
- *CONTROL-M/Enterprise Manager Utility Guide* describes the utilities used for creating and managing objects in the job production environment and maintaining various aspects of CONTROL-M/EM.
- *CONTROL-M/Enterprise Manager API Developers Guide* describes how to enable your applications to submit requests to CONTROL-M/EM.

Conventions

The following abbreviations are used in this guide:

Abbreviation	Description
CONTROL-M/EM	*CONTROL-M/Enterprise Manager*
Net	**CONTROL-M/EM** Network
home-directory	Directory in which **CONTROL-M/EM** is installed

The following conventions are used in this guide:

key	When describing keystrokes, the name of a key (for example, **F1**) is in boldface type. When two keys are joined with "**+**" as in **Shift**+**F1**, hold down **Shift** while pressing **F1**.
Menu => Option	This represents an option selection sequence. For example, **Users and Groups => Groups => Add** means that you first select **Users and Groups** from the menu bar. Select the **Groups** option from the submenu. Finally, select the **Add** option from the **Groups** submenu.
{Option A | Option B}	The vertical bar is used to separate choices. For example: **{AND | OR}** means that you specify either AND or OR.
[Option]	Square brackets are used to enclose parameters that are optional.
JCL Script	`All syntax, operating system terms, and literal examples are presented in this typeface.`
Boldface	In instructions, **boldface** type highlights information that you enter. File names, directory names and paths, and parameters also appear in boldface type.
Italics	*Italic* type is used to emphasize important terms. The titles of BMC Software product documentation are also displayed in italic type.
Ellipsis	An ellipsis (**. . .**) indicates that you can repeat the preceding item or items as many times as necessary.
Option Symbol	A vertical bar (|) separating items indicates that you must choose one item. In the following example, you would choose a, b, or c: a | b | c

CONTROL-M/Desktop Basics

Basic concepts

CONTROL-M / Desktop is a production design and definition system for users of CONTROL-M. It provides you with an intuitive and easy-to-use tool for creating and maintaining job processing definitions, scheduling tables, group scheduling tables, and calendars.

CONTROL-M / Desktop is a component of CONTROL-M / Enterprise Manager (CONTROL-M / EM). It is installed as a client component during CONTROL-M / EM installation. For more information see the *CONTROL-M/Enterprise Manager Installation Guide*.

CONTROL-M / Desktop runs under all supported Windows platforms. CONTROL-M / Desktop uses offline and online forms to simplify definition of job processing parameters, calendars and scheduling tables. For more information on supported Windows platforms, see the *CONTROL-M/Enterprise Manager Installation Guide*.

CONTROL-M / Desktop can help you

- display job hierarchy based on a CONTROL-M scheduling table or application / group parameters
- move job processing definitions between CONTROL-M installations / scheduling tables or between applications / groups using “drag-and-drop” techniques
- view and modify parameters in job processing definitions
- perform global search-and-replace of job processing parameters
- create multiple job processing definitions automatically with predefined parameters and functions

- define “collections” of job processing definitions for both viewing and performing mass updates
- view job production flow graphically, according to job dependencies
- view and modify calendars

New or modified scheduling tables are saved into the CONTROL-M / EM database. Both scheduling tables and calendars can be uploaded or downloaded from the CONTROL-M / EM database to their respective CONTROL-M / Server database directly in CONTROL-M / Desktop.

CONTROL-M/Desktop components

CONTROL-M / Desktop consists of the following components:

- Load Jobs Window – Means of selecting and transferring scheduling tables between CONTROL-M / EM and CONTROL-M / Desktop locally and online.
- CONTROL-M / Desktop Window – The user interface that displays draft data in various formats (views):
  - Tree View – Hierarchical list of job processing definitions displayed according to CONTROL-M / scheduling table or application / group hierarchy.
  - List View – Contents of the next level of detail of an item selected from Tree View.
  - Flow Diagram View – Graphic representation of job production flow based on various job dependencies.
  - Job Editing Form View – Editing window containing Job Production parameters of a selected job processing definition.
  - Group Editing Form View – Editing window containing parameters of a selected group scheduling table.
- Collections – Specified subsets of job processing definitions in a *draft*, used for filtered viewing and mass parameter modifications.
- CONTROL-M – Means of identifying scheduling tables and specific job processing parameters for different platforms or applications.
- Skeletons – Templates for creating job processing definitions based on default parameters and predefined functions.

- Mass Job Creation / Update Facility – Creates and updates multiple job processing definitions in a draft.
- Scheduling Table Manager – Enables the user to list, create, modify, delete, force, order, upload or download scheduling tables.
- Calendar Manager – Enables the user to view, create, modify, delete, upload or download Calendars.

Each of these components is described in detail below.

Drafts

The repository for storing and working on job processing definitions in CONTROL-M / Desktop is called a *draft*. Drafts can contain job processing definitions from either a single scheduling table or from multiple scheduling tables.

Drafts are totally independent of CONTROL-M and the CONTROL-M production environment. Because of this independence:

- Work can be saved without undergoing validity checks.
- Users do not require direct access to CONTROL-M, or the CONTROL-M platform, to be able to work in CONTROL-M / Desktop. At sites where only the CONTROL-M administrator has direct access to CONTROL-M, personnel from other departments can still work in CONTROL-M / Desktop.
- CONTROL-M does not have to be operational for job processing definitions to be created using CONTROL-M / Desktop.
- Working in CONTROL-M / Desktop does not negatively affect performance of the CONTROL-M platform.

Load modes for working in CONTROL-M/Desktop

To modify the production environment, first load the relevant job processing definitions and scheduling tables from the CONTROL-M/EM database into CONTROL-M/Desktop. The following modes are available for loading definitions into CONTROL-M/Desktop:

NOTE

It is not possible to work in both modes at the same time.

- ***Local mode***
  This mode is particularly useful when many modifications must be made to a scheduling table, and exclusive access to an entire scheduling table is preferred. To prevent multiple users from updating the same scheduling table concurrently, CONTROL-M/Desktop automatically locks the entire scheduling table when it is loaded in local mode.

  After creating or modifying job processing definitions in a draft, the user must perform the Write to CONTROL-M/EM operation to save all definitions back to the CONTROL-M/EM database. CONTROL-M/Desktop automatically unlocks a scheduling table when it is written back by the user or when the user ends the CONTROL-M/Desktop session.

- ***Online mode***
  This mode is used when modifications to definitions are not extensive (meaning, small, localized corrections are necessary), and can be made without interfering with the work of other users.

  This mode enables all users to view and access definitions without locking the scheduling table until a user starts modifying a definition. When that user saves the modifications, the modifications are saved directly to the CONTROL-M/EM database and the scheduling table is unlocked.

TIP

When working in online mode, you can browse a job processing definition so you can view its parameters without actually locking its scheduling table.

A comparison of online and local load modes

As indicated in Table 2 on page 23, when loading data from CONTROL-M/EM into a CONTROL-M/Desktop draft, different load modes are available. CONTROL-M/Desktop will save your modifications and implement locking mechanisms according to the mode you choose.

Table 1 A comparison of online and local load modes

	Online mode	Local mode
Description	This mode enables users to modify specific job processing definitions and save the modifications directly to the CONTROL-M/EM database without having to lock the entire scheduling table.	This mode automatically locks the entire scheduling table when it is loaded. Changes are saved to the CONTROL-M/EM database only when the Write to CONTROL-M/EM operation is performed.
Affected entities	Individual job processing definitions	Entire scheduling tables. Because a scheduling table is locked and written to CONTROL-M/EM as a whole when working in local mode, review the description of scheduling tables provided under
Locking mechanism	The scheduling table is locked only when one of its job processing definitions is being edited in the Job Editing form. Only at that time the scheduling table is not available to other users. Once the user saves the definition, the scheduling table is available again.	The scheduling table that contains the job processing definitions that are being modified is locked in its entirety as soon as the scheduling table is loaded and is not available for editing (only browsing is possible) to other users until the draft is closed or the user ends the CONTROL-M/Desktop session.
Saving mechanism	Modifications are automatically written to the CONTROL-M/EM database each time the user clicks **Save to Database**. There is no need to perform the Write to CONTROL-M/EM operation.	You have to manually perform the "Write to CONTROL-M/EM" operation to save modifications.
Availability of features	Creating and copying jobs: No Creating group scheduling tables: No Creating and deleting dependencies from the flow diagram: No Mass Create: No Mass Update: No Validity check: No CONTROL-M/Desktop wizard: No	Creating and copying jobs: Yes Creating group scheduling tables: Yes Creating and deleting dependencies: Yes Mass Create: Yes Mass Update: Yes Validity check: Yes CONTROL-M/Desktop wizard: Yes
Availability in previous CONTROL-M/Desktop versions	Available in version 5.0.0x.	Available as the Read from CONTROL-M/EM operation in versions 6.1.01, 6.1.02, and 6.1.03.

Locking scheduling tables

When loading definitions in local mode, CONTROL-M/Desktop must be able to access and lock entire scheduling tables in order to transfer (load) the data. After the necessary changes are made to the definitions, the scheduling tables are transferred (written) back to CONTROL-M/EM manually by the user. At this point, the scheduling tables are unlocked. This is discussed in more detail under "How scheduling tables are locked and unlocked in local mode."

When loading definitions in online mode, CONTROL-M/Desktop can access and transfer (load) the data without locking the entire scheduling tables first. The scheduling tables are locked only when changes are made to the definitions, and the changes are transferred (written) back to CONTROL-M/EM database automatically when the user clicks **Save to Database**. At this point, the scheduling tables are unlocked.

TIP

When working in online mode, you can browse a job processing definition so you can view its parameters without actually locking its scheduling table. To browse a job processing definition, right-click the job in the draft and choose the **Browse Job** option from the pop-up menu.

NOTE

If, for some reason, the connection between CONTROL-M/Desktop and CONTROL-M/EM is broken while you are working in online mode, the draft automatically closes.

How scheduling tables are locked and unlocked in local mode

To prevent multiple users from updating the same scheduling tables at the same time, CONTROL-M/Desktop automatically locks a scheduling table when it is loaded by a specific user in local load mode.

The following rules apply to lock/unlock:

- When you load a job processing definition in local mode, its corresponding scheduling table is locked automatically.
- When you load a scheduling table in local mode, it is locked automatically.
- When you write a scheduling table, it is unlocked automatically.
- The user loading the scheduling table in local mode can unlock that scheduling table using the unlock option in the Scheduling Table Manager.

- To unlock a scheduling table locked by someone else or unlock a scheduling table that you locked in a different session you must have **Full** authorization for Definitions.

- When you disconnect communication with the GUI Server, close a draft, or exit CONTROL-M/Desktop with a table still locked, a window is displayed prompting you to Unlock the table.

Moving from definition to production: an overview

Table 2 lists the tasks involved in capturing the current state of the production environment, making modifications in the definition environment, and then saving the modifications back to the production environment.

Table 2 Using the definition environment to modify the production environment

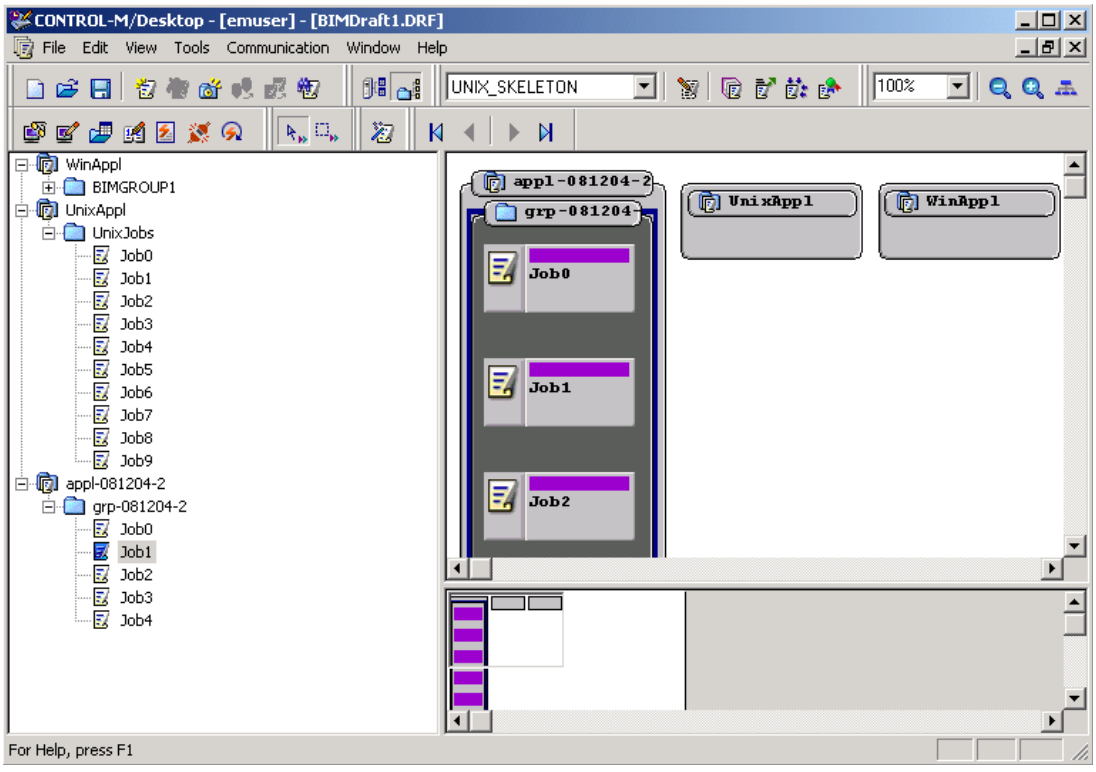
Product	Task	Reference
CONTROL-M/Desktop	1. Log into the GUI Server of CONTROL-M/EM.	"Logging into CONTROL-M/EM" on page 35
CONTROL-M/Desktop	2. Copy definitions from the CONTROL-M/EM database to a draft in the definition environment. This process is called loading, and can be done in online mode or local mode.	"Loading scheduling tables and jobs from the CONTROL-M/EM database" on page 55
CONTROL-M/Desktop	3. Make the necessary modifications in the definition environment to the job processing definitions and scheduling tables in a draft. (If working in online mode, you can only save to the CONTROL-M/EM database directly. There is no option to save to a draft.)	■ Chapter 2, "Working with drafts in the definition environment" ■ Chapter 3, "Working with the Job Editing form" ■ Chapter 4, "Creating and updating multiple jobs" ■ Chapter 5, "Working with the Group Editing form"
CONTROL-M/Desktop	4. If working in local mode, write new and modified scheduling tables to the CONTROL-M/EM database. (If working in online mode, CONTROL-M/Desktop performs an automatic write "behind the scenes.")	"Writing definitions (local mode only)" on page 59
CONTROL-M/Desktop	5. Upload new and modified scheduling tables to the CONTROL-M/Server database in a specified CONTROL-M installation, for scheduling in the production environment.	"Uploading definitions to the CONTROL-M/Server database" on page 210

Table 2 Using the definition environment to modify the production environment

Product	Task	Reference
CONTROL-M/Desktop or CONTROL-M/EM	6. Ordering or forcing the scheduling tables, to directly impact the production environment.	■ "Ordering and forcing scheduling tables" on page 203 of this guide ■ *CONTROL-M/Enterprise Manager User Guide*
CONTROL-M/EM	7. In the production environment, monitor progress of the jobs in the scheduling table(s) as they are ordered, as they run, and as they complete.	*CONTROL-M/Enterprise Manager User Guide*

CONTROL-M/Desktop window

Figure 1 CONTROL-M/Desktop window



Multiple windows can be opened at the same time to displaying different views of the same draft.

Data in a CONTROL-M/Desktop draft can be organized in different ways when it is displayed in a Draft window. Each of these displays is called a view. Each draft window contains either two or three panes, each of which displays one view at a time.

Draft views usually include a combination of graphic and text representation of draft items. Actions performed on an item in one pane affect the view of items displayed in another pane.

CONTROL-M / Desktop contains the following draft views:

- **Tree view**

  The left pane of the draft window displays a tree of job processing definitions in the draft. This “tree” is based on parameters in each job processing definition and can be displayed using either of two parameter hierarchies:

  — CONTROL-M Hierarchy
  CONTROL-M hierarchy is based on job processing parameters: CONTROL-M, Scheduling Table and Mem Name.

  — Application Hierarchy
  Application hierarchy is based on job processing parameters: Application, Group and Mem Name.

Figure 2 CONTROL-M hierarchy

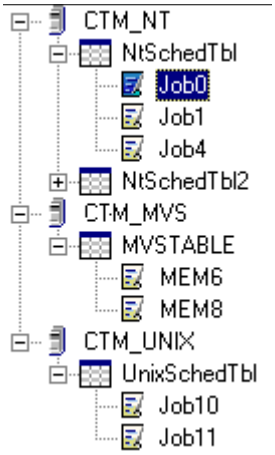
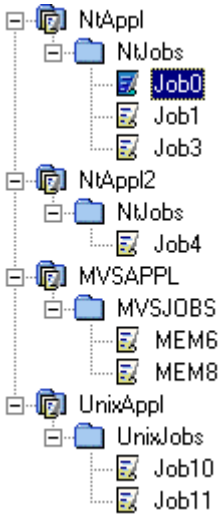


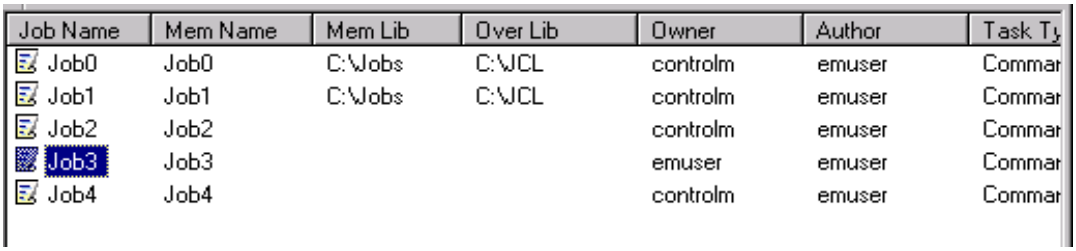
Figure 3 Application hierarchy



- **List view**

  List view displays the details of a selected item in the Tree pane.

Figure 4 List view

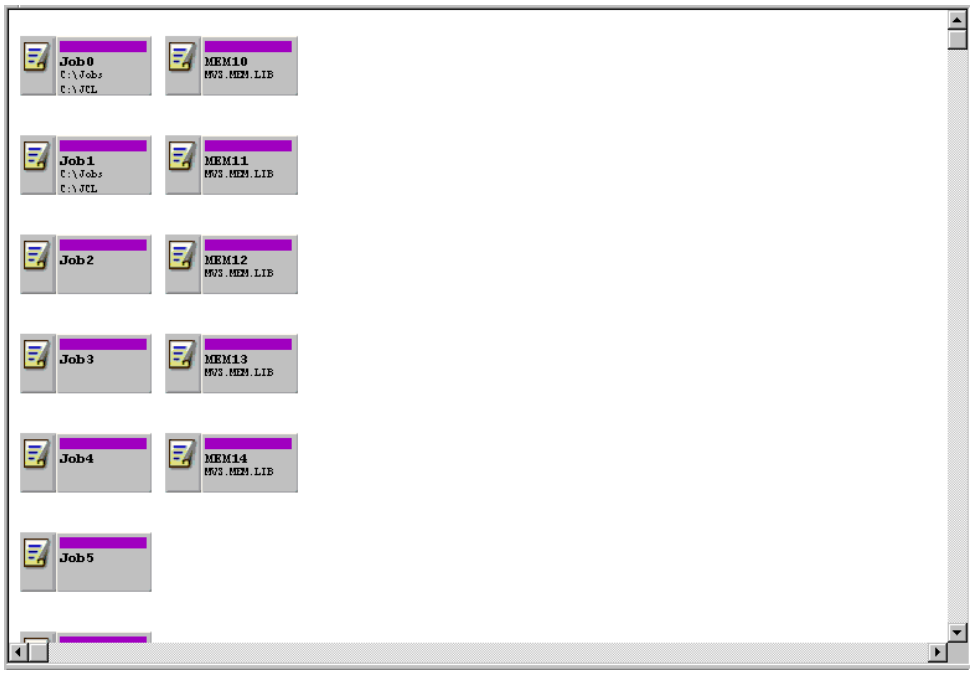


Job Name	Mem Name	Mem Lib	Over Lib	Owner	Author	Task Ty
Job0	Job0	C:\Jobs	C:\JCL	controlm	emuser	Commar
Job1	Job1	C:\Jobs	C:\JCL	controlm	emuser	Commar
Job2	Job2			controlm	emuser	Commar
Job3	Job3			emuser	emuser	Commar
Job4	Job4			controlm	emuser	Commar

■ Flow diagram view

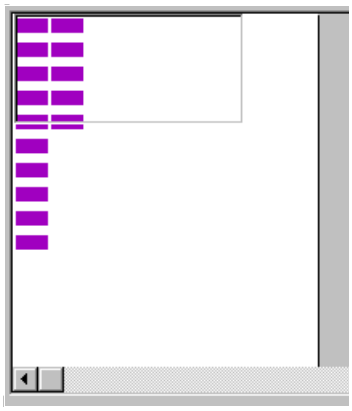
Flow Diagram view displays a graphic representation of job production flow, based on job dependencies established through prerequisite IN and OUT conditions.

Figure 5 Flow diagram view



A miniature overview (Net Overview) of the Flow Diagram is displayed in the lower right pane of the window. You can click on items in this pane to navigate more easily in the Flow Diagram.

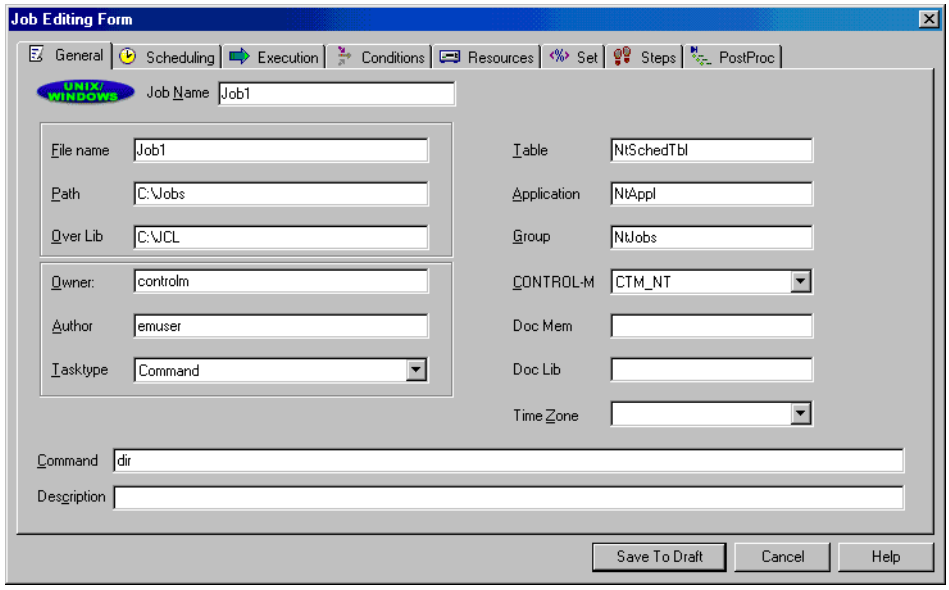
Figure 6 Net overview



■ Job Editing form view

The Job Editing form in CONTROL-M / Desktop displays all parameters in a job processing definition. When you double-click on a job in Tree, Flow Diagram or List view, or click on a job in Tree view under List / Job Editing Form view, the Job Editing form for that job is displayed.

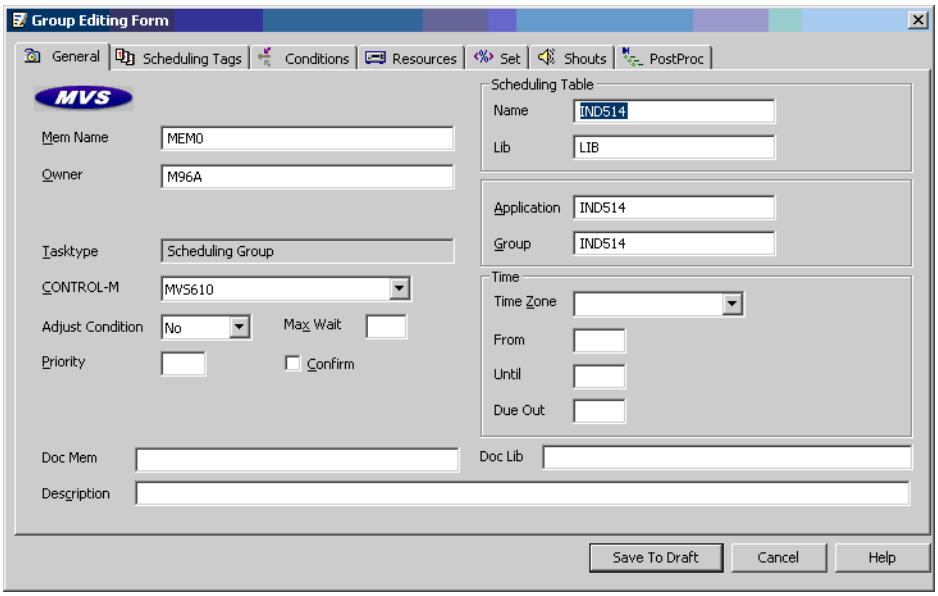
Figure 7 Job Editing form – General panel



- **Group Editing form view**

  The Group Editing form displays processing parameters for a group scheduling table. It is used to create new group scheduling tables (when working in local mode) and to modify processing parameters in existing group scheduling tables. When you double-click a group scheduling table node in Flow Diagram view, the Group Editing form for the table is displayed.

Figure 8 Group Editing form - General panel



Collections

A collection is a selection of jobs in a draft. CONTROL-M/Desktop allows you define a collection of the jobs upon which to work. This is especially useful for applying mass updates to all job processing definitions in a collection.

By default, the collection on which you work includes all jobs in the draft. You can adjust the collection as often as needed.

You can also add and delete specific jobs from a collection without having to define a new collection that would omit those jobs.

CONTROL-M/Server and CONTROL-M for OS/390 and z/OS

Each job processing definition handled by CONTROL-M / Desktop must be associated with one or more CONTROL-M / Server or CONTROL-M for OS / 390 and z / OS installations at your site. To create these associations, each relevant CONTROL-M installation must be defined in CONTROL-M / Desktop.

Skeletons

CONTROL-M / Desktop provides templates, called Skeletons, that allow you to create job processing definitions with default parameters and predefined functions. These skeletons can be used to automatically create individual job processing or group definitions, and multiple job processing definitions. These definitions can then be modified as necessary using the Job Editing form and the Group Editing form.

Each skeleton is associated with a CONTROL-M definition and an application type. The parameters in the displayed Job Editing form vary depending on these specifications. Possible variations are:

- Default (appropriate for most jobs)
- MVS job parameters
- Job parameters for a specific application (for example, Oracle Applications or SAP)

Mass job creation and update

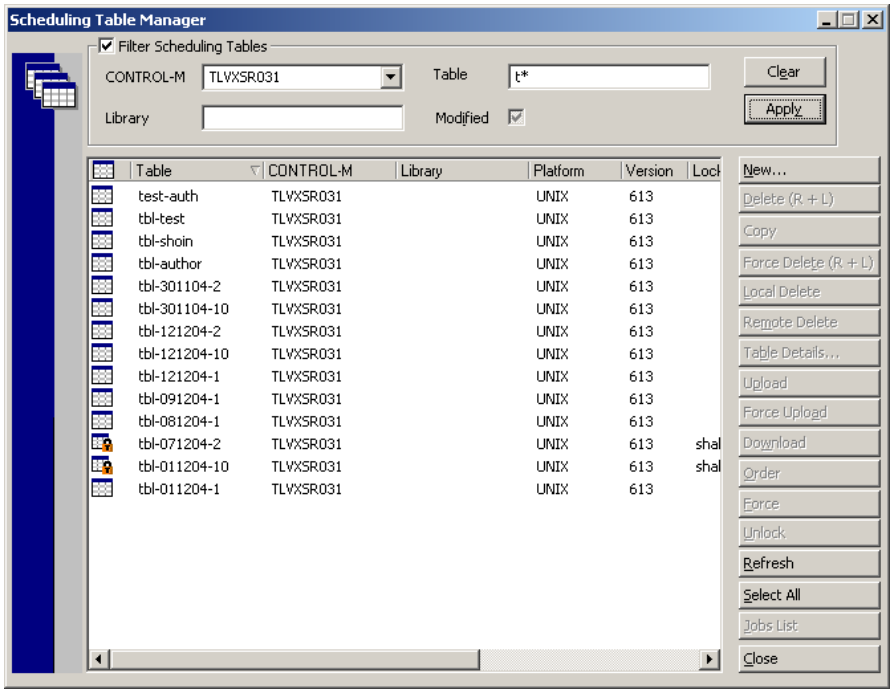
CONTROL-M / Desktop allows you to globally search and replace values in job processing definitions in the current draft. Together with collections, this global search and replace can be limited to jobs that satisfy specified criteria.

You can also create multiple job processing definitions automatically, based on skeletons.

The advantage of both of these features is to eliminate the need for individually defining and modifying job processing definitions with similar parameters. After using the mass job creation facility, you can define collections to filter the new definitions and use the mass update facility to further modify the definitions.

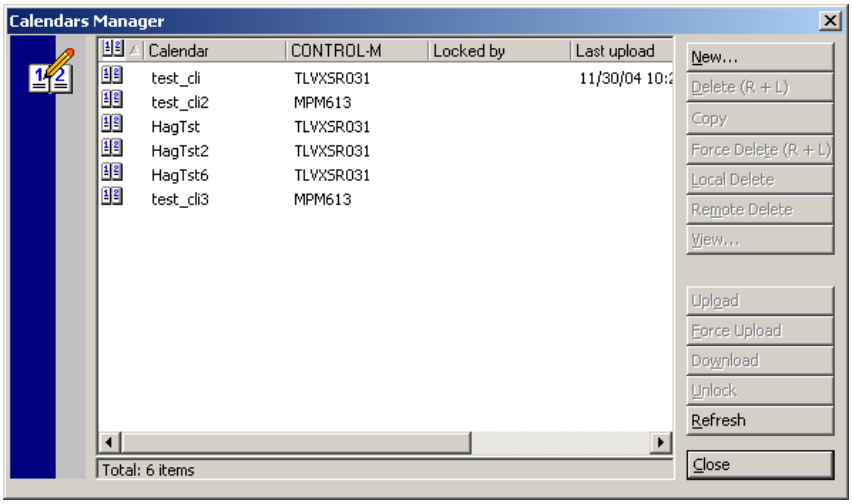
Scheduling Table Manager

The Scheduling Table Manager lists all scheduling tables in the CONTROL-M/EM database. It is used to modify, delete, force or order an existing scheduling table, create a new scheduling table, and upload or download scheduling tables to the CONTROL-M/Server database in the indicated CONTROL-M installation.



Calendar Manager

A CONTROL-M calendar contains a list of dates, usually spanning a number of months or years, which can be used as a basis for scheduling jobs. The dates on which a job can be ordered are limited by the calendars named in the scheduling parameters of the job processing definition. If no calendar is specified, the job is ordered solely on the basis of the other scheduling parameters. The Calendar Manager is used to define and edit calendars, and upload and download calendars from the CONTROL-M/EM database to the indicated CONTROL-M/Server database.



Language capabilities

Western European languages

CONTROL-M/EM, CONTROL-M/Desktop, CONTROL-M/Server, CONTROL-M/Agent, and CONTROL-M/eTrigger, support Western European language characters (the Latin-1 character set). These products can accept characters in English, German, Spanish, and French from the Latin-1 character set (ISO 8859-1) in almost all text fields and parameters. .

For additional information, see the following guides.

Task	Topic and guide
Indications of which parameters do not support Western European Language special characters	Individual parameter descriptions in the *CONTROL-M/Job Parameter and Variable Reference Guide*
A list of all parameters that do support Western European Language special characters	*The CONTROL-M Language Customization Guide*
A list of Western European Language special characters that are not supported at any time	*The CONTROL-M Language Customization Guide*
Language configuration instructions	*The CONTROL-M Language Customization Guide*
Migration instructions	*CONTROL-M/Enterprise Manager Migration Guide*
CONTROL-M / eTrigger customization instructions	"Use Locale" topic in Chapter 4 of the *CONTROL-M/eTrigger Administrator Guide*

When CONTROL-M / Desktop is first installed, its language is set according to the local settings of the computer. When CONTROL-M / Desktop connects to the GUI Server the first time, CONTROL-M / Desktop language settings are automatically updated to match those of CONTROL-M / EM.

Japanese

CONTROL-M can run on Japanese-enabled operating systems.

The CONTROL-M components, such as the EM GUI and CONTROL-M / Desktop, do not accept Japanese characters in any free text fields or parameters and display values only in English. For example, Japanese job sysouts do not display correctly. Therefore, in these cases, job sysout analysis is not possible.

Japanese configuration and installation instructions for running CONTROL-M components with Japanese-enabled operating systems are provided in the *CONTROL-M Language Customization Guide*

Basic tasks

Starting CONTROL-M/Desktop

To start CONTROL-M/Desktop

Perform either of the following:

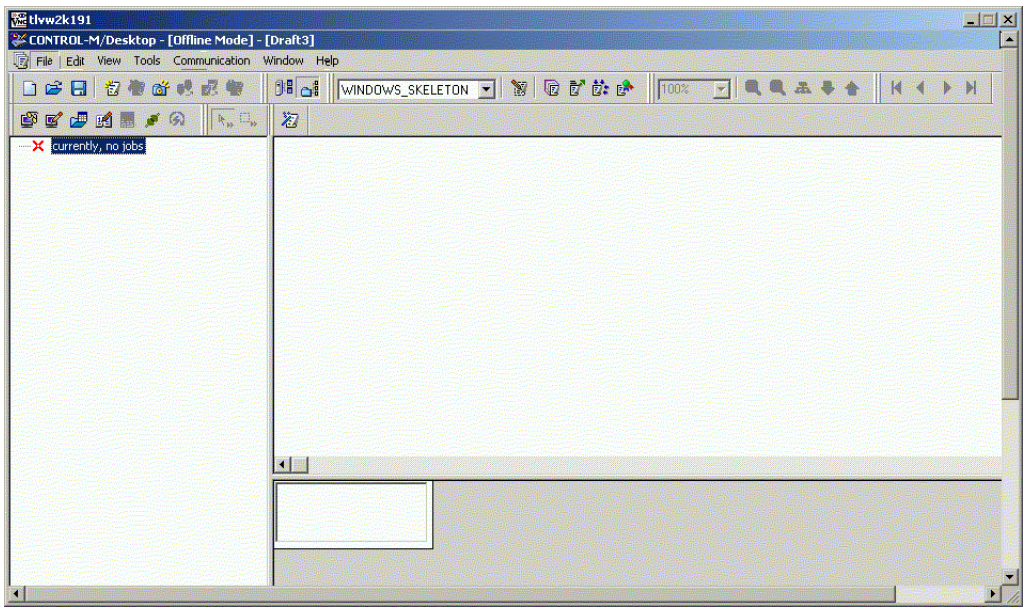
- Choose **Start => Programs => CONTROL-M Enterprise Manager => CONTROL-M/Desktop**.

  -or-

- Select **CONTROL-M/Desktop** from the **Tools** menu in the CONTROL-M/EM GUI.

  The following window is displayed.

Figure 9 CONTROL-M/Desktop window



Logging into CONTROL-M/EM

This section provides basic instructions for logging into CONTROL-M/EM's GUI Server. You must log in to CONTROL-M/EM in order to perform the following functions:

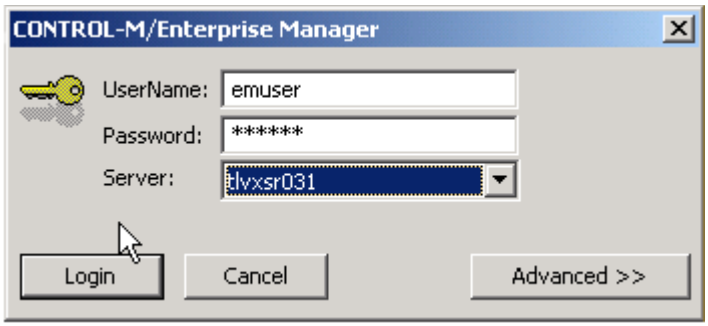
- Load from CONTROL-M/EM
- Write to CONTROL-M/EM
- Upload/download to/from CONTROL-M/Server
- Order/Force

NOTE

Additional instructions for advanced log in options, such as changing your password and switching to a different GUI Server, are provided in Appendix B, "Managing logon connections to CONTROL-M/EM."

To log into CONTROL-M/EM:

1 Click , or select **Communication => Connect to GUI Server**. A login window is displayed.



2 Specify your user name and password.

3 Select the GUI Server.

4 Click **Login**. Communication is established.

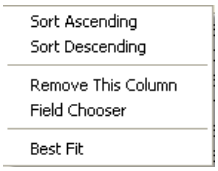
Working with list displays

Certain dialog boxes display lists of items, for example, lists of CONTROL-M definitions or lists of prerequisite conditions, from which you can make a selection. Many list displays contain an Item counter at the bottom that indicates the number of items appearing in the list.

You can modify many list displays, and perform other tasks in list displays. Two pop-up menus enable the various modification and other tasks:

- The column header pop-up menu

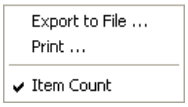
Figure 10 Column header pop-up menu for list displays



This menu is used for performing most modifications. To display this menu, right-click in the header of the column in the list display. Changes made are saved and redisplayed the next time the list is displayed.

- The list display pop-up menu

Figure 11 List Display Pop-up Menu



To display this menu, click anywhere in the list display except the column header.

Modifying list displays

The following modifications can be made to list displays:

- Toggle the Item Counter on and off
- Sort the list according the values in a column
- Remove a column from the list
- Add fields to the list display
- Resize a column's width
- Reorder columns

Toggling the item counter is performed from the list display pop-up menu. The other modifications are performed from the columns headers or the column header pop-up menu.

NOTE

Not all list displays can be modified, and not all modifications are possible in modifiable list displays. Furthermore, some modifications require Administrator permissions.

To display/hide the item count in a list display

Click **Item Count** in the list display pop-up menu.

To sort the list according to the values in a column

Perform one of the following:

- Right-click the column header. Select either **Sort Ascending** or **Sort Descending**.

  -or-

- Click the column header.

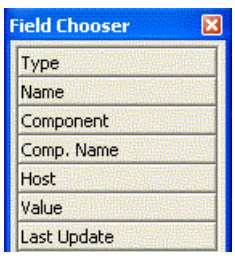
The selected column initially sorts in ascending order (default). Once the column is already being used as the sort column, each click of the column header toggles between ascending and descending sort.

An alphabetic sort is performed, except the **Last Update** column is sorted by date. The date format is determined by the locale setting of the computer. For information about how to change the date format, see the manual of your operating system.

To add a field to the display:

1 Right-click the column header. Select the **Field Chooser** option.

The Field Chooser menu is displayed with the appropriate fields.



2 Click and drag the field from the **Field Chooser** menu to the wanted location in the column header of the list.

To remove a field from the display

Perform one of the following:

- Right-click the column header and select **Remove This Column**.

  -or-

- Right-click the column header and select the **Field Chooser** menu. Then drag the header from the list to the Field Chooser.

To rearrange the fields in the display

Click and drag (right or left) the column header of the field to be moved.

To resize a column in the display according to its best fit

Perform one of the following:

- Right-click the column header of the column to be adjusted and select **Best Fit**.

  -or-

- Double-click the header's right border.

  The column width is adjusted to fit the longest value in the column.

Performing other tasks in the list display

You can perform the following tasks from the List Display pop-up menu, which is displayed by right-clicking anywhere in the list display (except the column header).

- Save the contents of the list display to a CSV file
- Print the contents of the list display

To save the contents of a list display to a CSV file

Select **Export to File** in the pop-up menu of the list display, and perform the save in the Export to File dialog box.

.csv files are comma-delimited and can be used in applications such as Microsoft Excel.

To print the contents of a list display

Select the **Print** option in the pop-up menu of the list display.

Specifying Pattern-Matching strings

Fields used to select data (for example, in the Scheduling Table Manager window), accept pattern-matching strings, or expressions, as input. Using these strings, the user can select many different entities by specifying a relatively simple combination of characters and symbols.

NOTE

The use of complex expressions tends to reduce CONTROL-M / Desktop performance.

Table 3 describes the symbols used to compose pattern-matching strings.

Table 3 Symbols used to compose pattern-matching strings

Symbol	Name	Usage
*	Asterisk wildcard	Denotes any number of characters (including no characters). This can be inserted in place of a string. **Note:** In filter criteria fields, if filtering is not needed, it is more efficient to leave the field blank than to use the "*" character.
? or .	Question mark wildcard, or period	Denotes any single character. This can be inserted in place of any number of characters.

Table 3 Symbols used to compose pattern-matching strings

Symbol	Name	Usage
!	Exclamation	Denotes all possibilities that do not match the pattern that immediately follows the **!** character. This can be specified to exclude the pattern immediately following the **!** from the result. Where a pattern begins with **!**, the escape character backslash "\" can be used to escape the **!** and either include or exclude the pattern (required only where **!** is the first character). For example, to include occurrences of "**!wip**", use the pattern "**\!wip**", whereas "**!\!wip**" excludes "**!**wip". **Note:** **!** must be the first character of the string, for example, in the expression (first**!**,**!**one) the exclamation is part of the string "first**!**", but is used to exclude the string "one". ■ **!** is evaluated literally in collection and filter definition fields.
[ ]	Brackets	Denotes different possibilities for a single character. The brackets enclose a string of possible values. In addition, the following symbols can be used within the brackets: ■ **–** denotes a range of characters. ■ ^ used as the first character in the brackets to denote "not".
, or **|**	Comma or pipe	Used to separate pattern-matching strings, allowing the user to specify more than one string (the comma represents a Boolean OR). **Example** (host01, host02, host03) **Note:** "," is evaluated literally in collection and filter definition fields.
<character>	Character	Any character, other than one of the above, denotes the specific character. **Note:** In case-sensitive fields, CONTROL-M / Desktop differentiates between uppercase and lowercase characters (for example, "a" and "A" are regarded as two different characters).
^	Anchor (start)	■ Denotes "not" when used as the first character in brackets [ ]. ■ Denotes the start of a word when not specified in brackets [ ].

Table 3 Symbols used to compose pattern-matching strings

Symbol	Name	Usage
$	Anchor (end)	Denotes the end of a word.
\<special_ character>	Escape character	Denotes the literal value of the special character. The special characters are the symbols described in this table. **Examples** ■ To specify \, type \\. ■ If you specify **\.** then "**.**" has the meaning of period and not the same meaning as **?.** ■ Use "\" to escape **!** only where **!** is the first character.

NOTE

XML term files support the use of "," to separate values and "!" to exclude values.

TIP

If you use special characters, such as asterisk, as a literal part of the object name (for example, **glo*-job1_started**), and when you filter you want to include only these objects (for example, you do not want to include **glo-job1_started**), specify \ before the special character in the filter prefix (for example, **glo***). Otherwise, objects without the special character (for example, **glo-job1_started**) will also be included. (Wherever possible, try to avoid defining object names with special characters as literals.)

Table 4 lists examples of expressions used to select data centers. Specifying any one of them would include data center DALLAS.

Table 4 Examples of expressions

Pattern	Includes...
DALLAS, NY, LA	The three data centers DALLAS, NY, LA.
D*S	All data centers whose name starts with D and ends with S.
D????S	All data centers whose name starts with D, ends with S and consists of six characters.
D*ALL?S	All data centers whose name starts with D and ends with five letters matching the pattern signified by ALL?S.
!NY	All data centers except for NY.
LA,!NY,D*S	Data centers LA and DALLAS, excluding NY.
DALLAS,TEXAS*	The data centers DALLAS and TEXAS*.
D[ABC]*	All data centers whose name starts with D and whose second letter is A, B or C.
D[A-E]????	All data centers whose name starts with D, whose second letter is in the range of A-E and whose name consists of six characters.

Table 4 Examples of expressions

Pattern	Includes...
D[^B-Z]*	All data centers whose name starts with D and whose second letter is not in the range of B-Z.
NY,D*S	Data center NY and all data centers matching the pattern signified by D*S.

Using SQL wildcards

The SQL wildcards:

- **%** – denotes any or no character
- **_** – denotes any one character

These wildcard characters, when used in ViewPoint collections and filter definitions, are evaluated as literal % and _ and not as wildcards.

Chapter 2

Working with drafts in the definition environment

The CONTROL-M/Desktop window displays scheduling tables and jobs in a definition environment. The jobs can be filtered and ordered in a hierarchical structure. The filter and hierarchical specifications are saved in a *draft*, which is the work area through which you view the jobs in the definition environment that are relevant at that time. Drafts can contain job processing definitions from either a single scheduling table or from multiple scheduling tables.

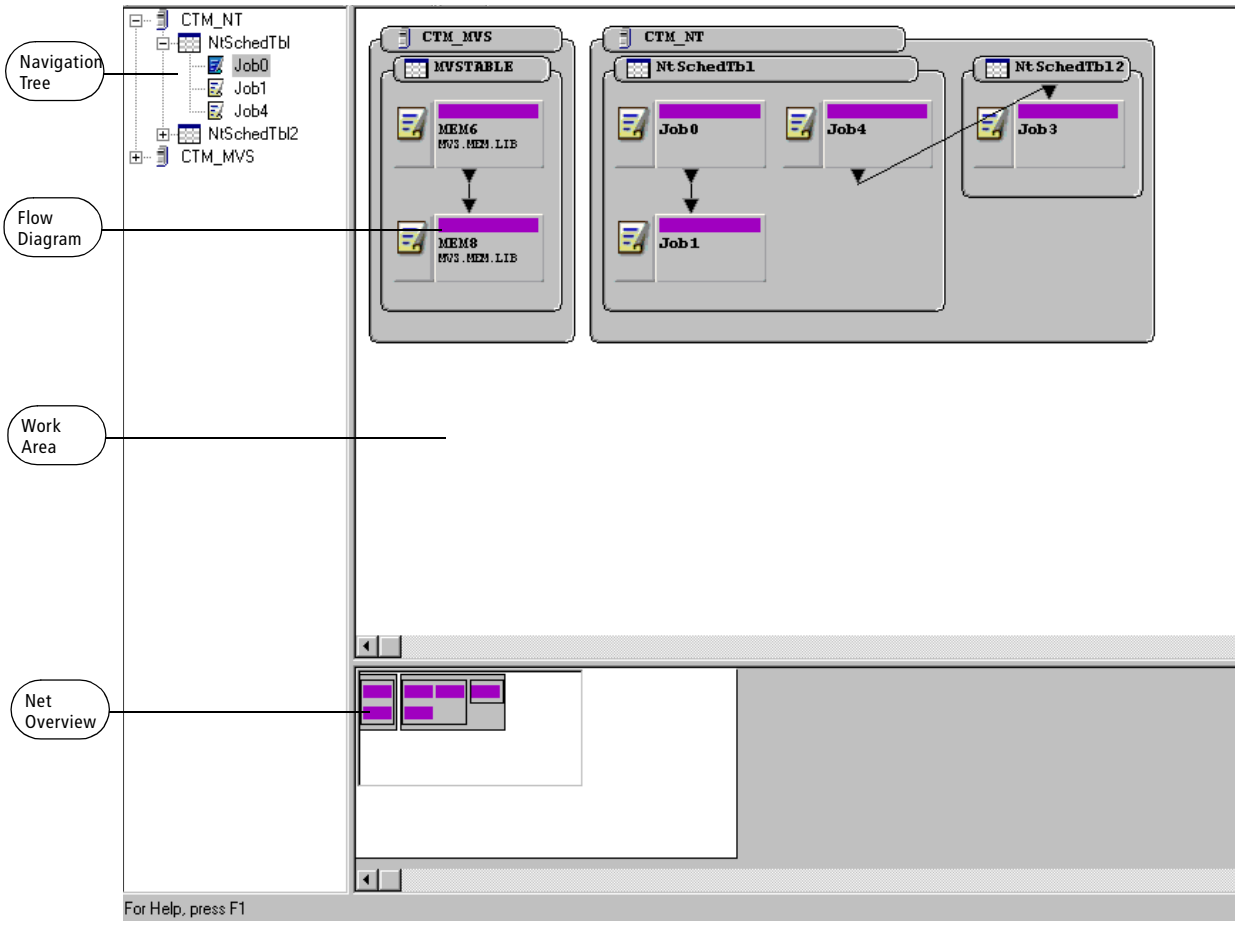
This chapter describes how to work with drafts in the CONTROL-M/Desktop window. The following main topics are described:

- Introduction to the CONTROL-M/Desktop window
- Getting started with drafts, including Loading scheduling tables and jobs from the CONTROL-M/EM database
- Viewing drafts
- Navigating in the draft
- Modifying drafts
- Working with group scheduling tables
- Printing a draft

Introduction to the CONTROL-M/Desktop window

Figure 12 illustrates the CONTROL-M / Enterprise Manager window with an open Draft window.

Figure 12 Draft window



Draft windows consist of the following panes:

- *Navigation Tree*
  Hierarchical view of jobs in the definition environment, mainly for navigation purposes. For more information, see "Understanding the Navigation Tree and its components" on page 46.

- *Work Area*
  Area for modifying the definition environment. For more information, see "Understanding the Work Area, its views, and components" on page 48. The work area is displayed in one of the following views:

  — *Flow Diagram*
  Graphic representation of job production flow, based on job dependencies established by prerequisite conditions specified in job processing definitions (IN and OUT conditions).

  Components of the definition environment are represented by boxes called nodes. The information displayed in a node varies depending on the type of node and on how certain customization options.

  For more information, see "Flow Diagram view" on page 51.

  — *List Mode*
  Details of the item currently selected in the Navigation Tree in list format. For more information, see "List Mode view" on page 48.

  — *Editing Form*
  Details of the group or job currently selected in the Navigation Tree in its editing form. For more information, see "Editing Form view" on page 50.

- *Net Overview*
  Miniature version of the Flow Diagram, indicating the part of the network currently displayed in the Flow Diagram. By dragging the selected area in this view to a different part of the network, you can quickly navigate in a complex environment. For more information, see "Understanding the Net Overview and its components" on page 47.

TIP

Each of the three panes can be re-sized separately by dragging their borders to the desired position.

Understanding the Navigation Tree and its components

A Navigation Tree of the current draft is displayed on the left side of the Draft window. The Navigation Tree is sorted either according to CONTROL-M installation or according to application. These sort-orders are called *hierarchies*. Each hierarchy is sorted according to parameters in each job processing definition:

- **CONTROL-M hierarchy** is sorted according to the CONTROL-M, Scheduling Table, and Mem Name parameters.
- **Application hierarchy** is sorted according to the Application, Group, and Mem Name parameters.

When opening an existing draft or loading data into a draft, the highest level in the hierarchy is displayed in Navigation Tree on the left side of the Draft window. The corresponding Flow Diagram is displayed in the upper-right of the Draft window. A net overview of the Flow Diagram is displayed below the Flow Diagram.

When you double-click an application name or icon or single click the + preceding the application in the left pane, the Navigation Tree expands to the next level of detail, listing all the groups in that application. To decrease the level of detail for an item in the Navigation Tree, double-click the item or click the − preceding the item name.

When you double-click one of the groups, the Navigation Tree expands to list all the job processing definitions in that group.

When you click a job in either the Navigation Tree or Flow Diagram, the job is highlighted in the Flow Diagram and that section of the diagram is highlighted in the Net Overview.

CONTROL-M / Desktop uses various icons next to each item name to indicate the level in the hierarchy.

- The icons in the CONTROL-M hierarchy are described in Table 5.
- The icons in the Application hierarchy are described in Table 6.

Table 5 Icons in the CONTROL-M hierarchy

Icon	Description
	Indicates a CONTROL-M installation
	Indicates a scheduling table
	Indicates a job
	Indicates a job in a group scheduling table

Table 6 Icons in the Application hierarchy

Icon	Description
	Indicates an application
	Indicates a group
	Indicates a job
	Indicates a job in a group scheduling table

NOTE

Scheduling table library names are indicated with scheduling table names in the Navigation Tree only if there is more than one table with the same name in the relevant CONTROL-M installation.

Understanding the Net Overview and its components

The portion of the Flow Diagram contains a miniature version of the current Flow Diagram. This is the Net Overview. The part of the Flow Diagram that is currently displayed above, is enclosed in a rectangle in the Net Overview. When you can click a node in the Net Overview, the Flow Diagram is adjusted to view the selected part of the job flow.

If there are too many nodes in the current level to be displayed in the Net Overview, only part of the current level is displayed. The Net Overview can be scrolled to view other parts of the Flow Diagram.

Figure 13 Net Overview

To select an area in the Net Overview:

1 Click and drag the rectangle in the Net Overview pane until the it include the job flow that you want to display in the Flow Diagram.

Understanding the Work Area, its views, and components

The following views can be displayed in the work area pane of the Draft window.

- List Mode view
- Editing Form view
- Flow Diagram view

List Mode view

The List mode displays details (the next level of items) of the item currently selected in the Tree (the left pane of the CONTROL-M / Desktop window). For example, if you select an application in the Tree, the groups in that application are displayed in List mode. You can also use List Mode for selecting jobs for editing.

To switch to List Mode view

1 Select the item in the Navigation Tree.

2 Change the view using the **List/Job Editing** option from the **View** menu. The details for the selected item are displayed in list format in the work area.

Figure 14 List Mode view

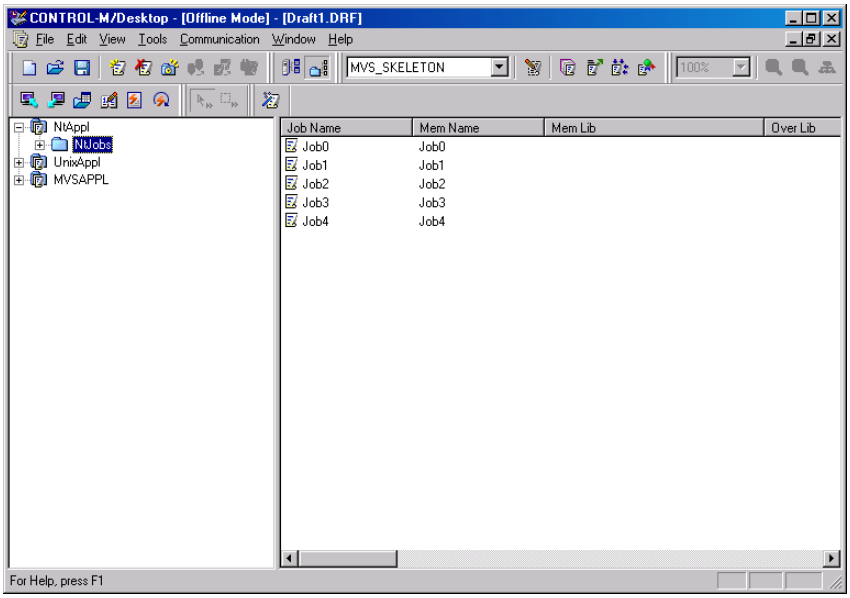


Table 7 describes the nodes that can be displayed in the CONTROL-M / Desktop Draft window when in List mode.

Table 7 Display according to node selected in the Navigation Tree

Icon	Navigation Tree node	Displayed item in List Mode view
	CONTROL-M	List of scheduling tables in the CONTROL-M
	Scheduling Table	List of jobs in the scheduling table
	Application	List of groups in the application
	Group	List of jobs in the group
	Job	Job Editing form for the job

List mode provides the following advantages:

- List mode provides additional information about the nodes displayed. (the Navigation Tree lists only the node names.) For example, jobs displayed in List mode, are displayed with the values of the Owner, Member name, Member library and Description parameters.
- Only one node can be selected at a time in the Navigation Tree. Multiple items can be selected in List mode. For example, you can delete only one job at a time in the Navigation Tree. You can delete multiple jobs in List mode.
- Combining two views allows you to simultaneously see items at one level in the Navigation Tree and the contents of another item in List mode.

To return to the Flow Diagram view from List Mode view

1 Right-click the CONTROL-M / Desktop window to display the following menu:

Figure 15 Editing Mode pop-up menu

2 Select **Flowdiagram View**.

Editing Form view

To display the editing form for a job or group in the Work Area pane:

1 Double-click the job or group in the Navigation Tree. The appropriate editing form is displayed in its own dialog box.

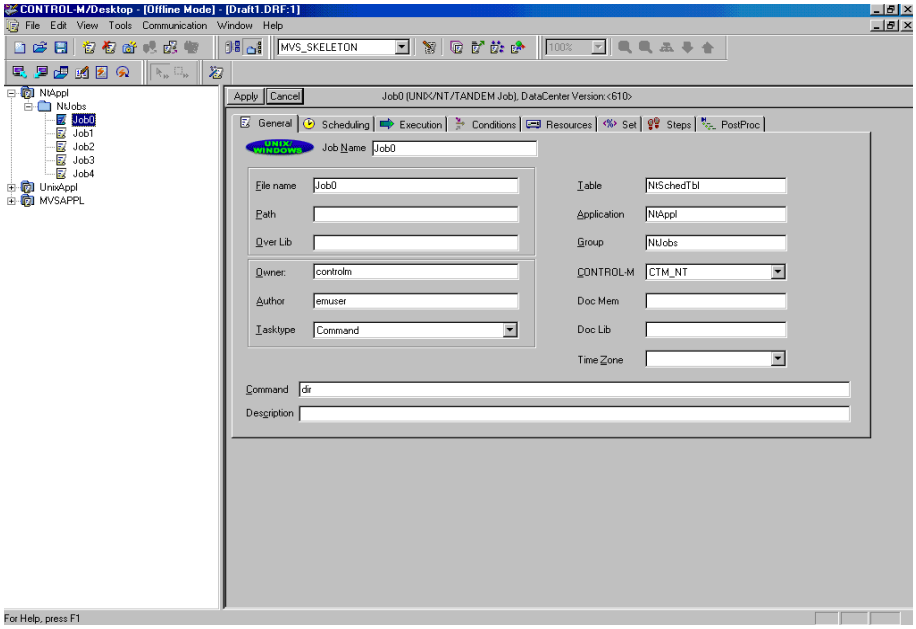
-or-

Select the job or group in the Navigation Tree, and change the view using the **List/Job Editing** option from the **View** menu. The editing form is displayed in the work area.

TIP

You can move between various job definitions without closing and opening the form for each job. If you make any changes to the parameters, select **Apply** or **Cancel** at the top of the form before selecting the next job from the Navigation Tree.

Figure 16 Job Editing form



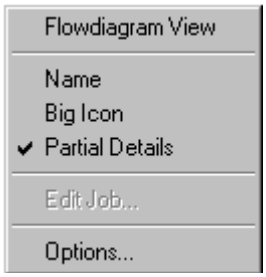
NOTE

When you click a group item in the Navigation Tree, the Job Editing form is replaced with a list of the jobs in the group.

To return to the Flow Diagram after displaying the Job Editing form

1 Right-click the CONTROL-M/Desktop window to display the following menu:

Figure 17 Flow Diagram pop-up menu when in Editing Mode



2 Select **Flowdiagram View**.

NOTE

Other operations that can be performed when displaying the Job Editing form or Group Editing form in the Flow Diagram pane include:

- Displaying the icon and the name of the job or group
- Displaying large icons and names for each icon
- Editing the Job Editing form or Group Editing form instead of viewing it
- Accessing customization options
- Displaying relevant details for the group (number of jobs in the group) or the job (owner, memlib and job description)

These options are available from the menu that is displayed after right-clicking the CONTROL-M/Desktop window with the Job Editing form or Group Editing form displayed.

Flow Diagram view

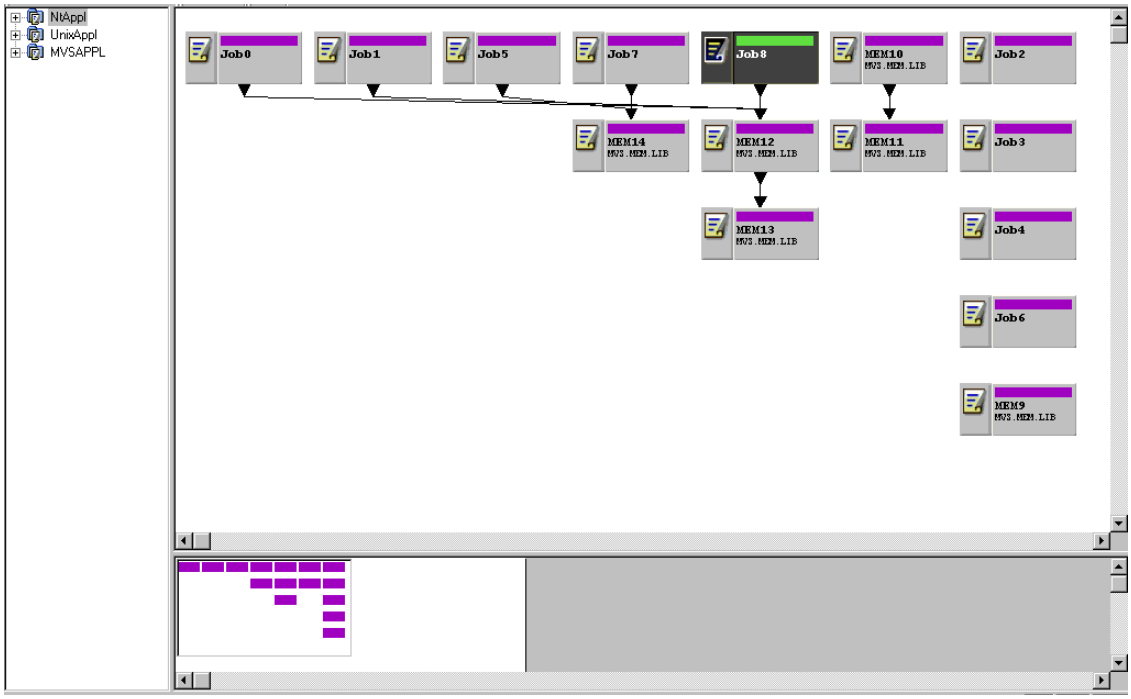
Flow diagram mode displays a draft containing the job production flow in a graphic format. The job flow reflects job dependencies indicated by prerequisite In and Out conditions in job processing definitions.

Each CONTROL-M/EM element is represented by a node that is displayed in the Flow Diagram. The most common node is the job node. Each job node represents a job processing definition. You can modify or delete existing job nodes (when working online or locally) or create new definitions (when working locally) that are represented by nodes.

To display the Flow Diagram:

1 Select **View => Flowdiagram.**

Figure 18 Flow Diagram view



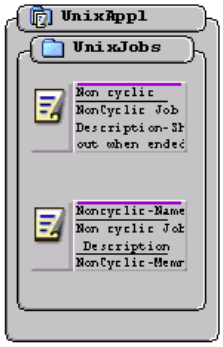
Each entity (application, group, CONTROL-M, scheduling table, job, or group scheduling table) in the Flow Diagram is represented by a node. The smallest entity is the job node. The top part of the job node contains the Job Title.

The area inside the job node is called the Job Area. Two fields from the job processing definition are displayed in the Job Area below the Job Title. The Job Title and the two fields to be displayed in the Job Area can be customized in the **Flowdiagram - Nodes** panel of the Options dialog box.

In this same Flowdiagram - Nodes panel, the user can also request that displayed values be wrapped if they are too long for display on single lines (otherwise the values are truncated).

When the Wrap option is selected, all the selected information can be displayed in up to four 14-character lines (a total of 56 characters for all the fields). A marker line appears between displayed fields to indicate when one field ends and a new field begins. (If the Wrap option is not selected, no marker line appears because each displayed line always represents a new field.) Figure 19 indicates a job node with the Wrap option on.

Figure 19 Job node with Wrap option on



Triangular symbols called Connectors appear at the top and bottom of the job nodes:

- The In Connector at the top represents the job's In conditions.
- The Out Connector at the bottom represents the job's Out conditions.

Job dependencies are indicated by dependency lines from the Out Connector of the predecessor to the In Connector of the successor. Job dependencies can be created using this graphical representation (in local mode only). For more information, see "Creating and modifying conditions and dependencies" on page 81.

NOTE

Elements of the Flow Diagram (for example, graph placement) can be modified in the **Flowdiagram** panels of the **Options** dialog box. For more information about these elements, see:

- "Flowdiagram – General panel" on page 247
- "Flowdiagram – Nodes panel" on page 248
- "Flowdiagram – Links panel" on page 250
- "Flowdiagram – Colors panel" on page 251

Getting started with drafts

To define the production environment, one performs one of the following tasks:

- Opening an existing draft
- Creating a new draft
- Loading scheduling tables and jobs from the CONTROL-M/EM database

Opening an existing draft

To open an existing draft:

1 Choose **File => Open** or click **Open** on the toolbar.

2 Choose the drive, directory, and draft, and click **Open**.

Only one draft can be open at a time. Therefore, when you open a draft, CONTROL-M / Desktop automatically closes the previously opened draft (if it is still open):

- If no changes have been made to the previous draft, it is closed automatically.
- If changes have been made, you are prompted to save the changes. The previous draft is then closed accordingly.

NOTE

When you open an existing draft using **File => Open**, the draft opens in local load mode.

3 Modify the draft as wanted, as described under "Modifying drafts."

4 Choose **File => Save** or click on the toolbar.

NOTE

No validity checks are performed when the draft is saved.

Creating a new draft

To create a new draft:

1 Choose **File => New** or click **New** on the toolbar.

2 Modify the draft as wanted, as described under Chapter 2, "Modifying drafts.".

3 Choose **File => Save** or click on the toolbar.

NOTE

No validity checks are performed when the draft is saved.

4 If the current draft has not been saved previously, a dialog box is displayed allowing you to specify the name and path for the draft.

The first time you save a draft, the default location is your My Documents folder. From then on, the default location for new drafts is the location where you most recently saved a draft.

Loading scheduling tables and jobs from the CONTROL-M/EM database

Job processing definitions and scheduling tables can be loaded from the CONTROL-M / EM database into the current draft.

An overview of this process is discussed in Chapter 1, “Load modes for working in CONTROL-M / Desktop.” Details for loading job processing definitions and scheduling tables are provided below.

To load scheduling tables from the CONTROL-M/EM database:

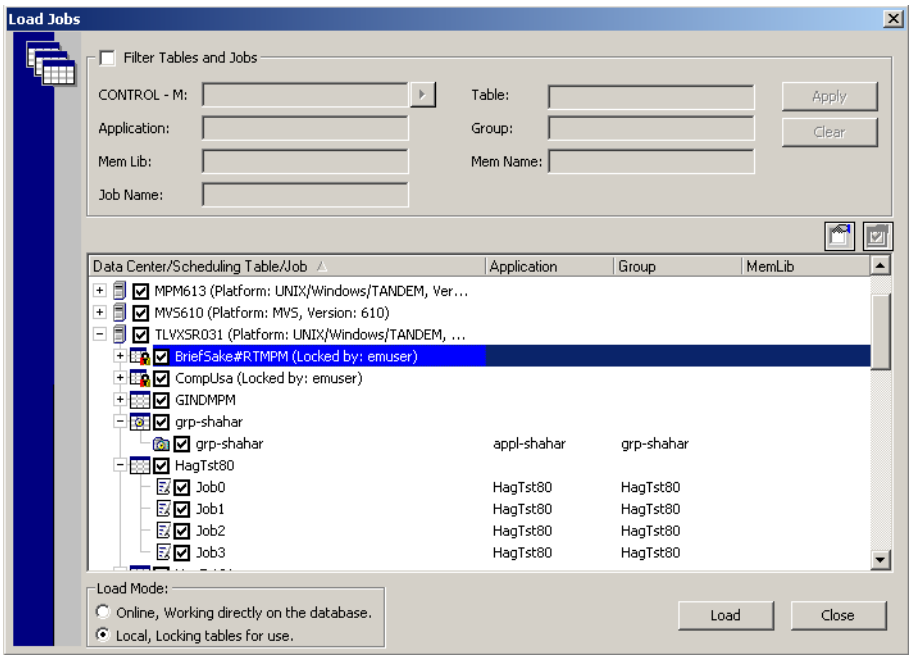
1 If no draft is open, open a new draft.

NOTE

All scheduling tables loaded into a draft must be of the same load mode.

2 Choose **File =>Load jobs from CONTROL-M/EM**, or click  .The Load Jobs window is displayed.

Figure 20 Load Jobs window



NOTE

- When displayed for the first time in a session, the Filter Tables and Jobs fields are blank. The next time this window is opened, the fields remain populated from the previous load.
- To load all scheduling tables and jobs, click **Load** without specifying filter criteria.

3 In the Filter Tables and Jobs area, specify criteria which will help you locate the job processing definitions and scheduling tables you want to load (for example, the CONTROL-M on which the scheduling tables reside, the group, and so on).

A When specifying values for the filter criteria:

- An And relationship exists between all specified fields.
- A blank field is equivalent to specifying *****, meaning all values are returned for that field if left blank.
- Use commas to separate multiple values.
- When specifying a data center in the CONTROL-M field: Specify an expression by selecting data centers from the drop-down list and / or typing data center names.
- For all fields, you can use pattern-matching strings to compose a regular expression. For more information, see "Specifying Pattern-Matching strings" on page 39.

B Click **Apply**.

4 Select the check boxes next to the desired data centers, scheduling tables and job processing definitions.

- You can expand and collapse the entities as needed by clicking the plus (+) and minus (-) signs.
- You can select all check boxes associated with the selected entity by clicking the icon at the upper-right corner of the window, or clear them by clicking .

TIP

If any scheduling tables are locked, the name of the user who has the scheduling table locked is displayed next to the scheduling table.

5 Select either **Local** or **Online** for the load mode. To help you decide which mode is appropriate, see "A comparison of online and local load modes" on page 21.

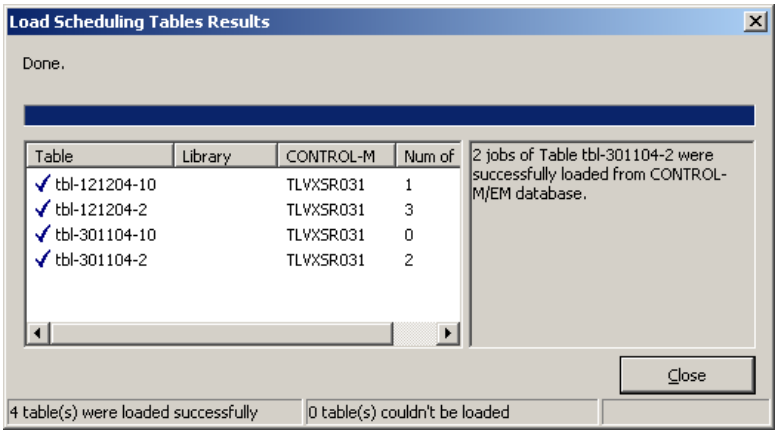
NOTE

Once you select a mode and load the definitions into the current draft, all subsequent loads that you perform must be of the same load mode, until you either close the current draft or exit the current CONTROL-M / Desktop session. For example, if you are working online, any subsequent loads that you perform must be of type online.

6 Click **Load**. The Load Scheduling Table Results window is displayed.

TIP

As you select each row in the Load Scheduling Tables Results window, information about that row appears in the right-most pane of the window.



7 Click **Close**. The scheduling tables and job processing definitions are loaded into the current draft.

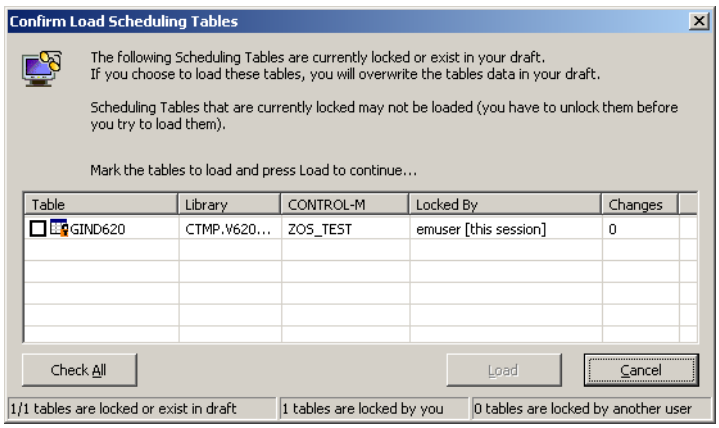
Determining if you are working in online or local mode

The following are indications that you are currently working in online mode:

- The title bar of the Flow Diagram window displays the words “Online Mode” instead of the name of a draft.
- Options and parameters that would create a job or a group scheduling table (both directly and indirectly) are unavailable (greyed out).
- When working in the Job Editing form, the **Save to Database** button is available instead of the **Save to Draft** button.

Considerations for loading multiple copies of the same scheduling table

- If you have a copy of one scheduling table open in your draft in local mode, and you load a table of the same name within the same CONTROL-M from the CONTROL-M/EM database, the draft copy of the table is overwritten.
- If you have a copy of several scheduling tables open in your draft in local mode, and you load scheduling tables of the same name within the same CONTROL-M from the CONTROL-M/EM database, the Confirm Load Scheduling Tables dialog box is displayed. In this dialog box, you specify which scheduling tables you want to overwrite. (Only scheduling tables that are unlocked can be loaded again.) Select the check box of any scheduling table you want to overwrite and click **Load**.



Saving definitions

When working in online mode, all changes made to a definition are saved automatically in the CONTROL-M/EM database. There is no need to perform a Write to CONTROL-M/EM operation.

When working in local mode, all changes are first saved to a draft. Then, the Write to CONTROL-M/EM operation must be performed for the changes to be saved in the CONTROL-M/EM database.

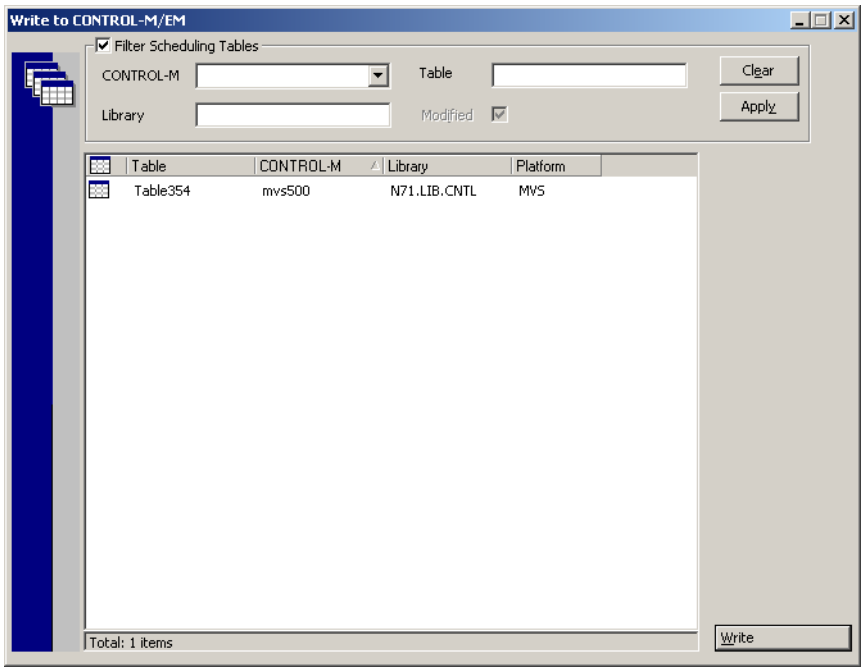
Writing definitions (local mode only)

When working in local mode, changes made to a definition are saved locally in the draft, and are not automatically saved in the CONTROL-M/EM database. Therefore, you must perform the Write to CONTROL-M/EM operation to save the changes in the CONTROL-M/EM database.

To write definitions to the CONTROL-M/EM database:

1 Open the draft containing the job processing definitions for the scheduling table.

2 Choose **Edit => Scheduling Tables => Write to CONTROL-M/EM**, or click . the Write to CONTROL-M/EM window is displayed.



3 Select the scheduling tables that you want to write to the CONTROL-M/EM database.

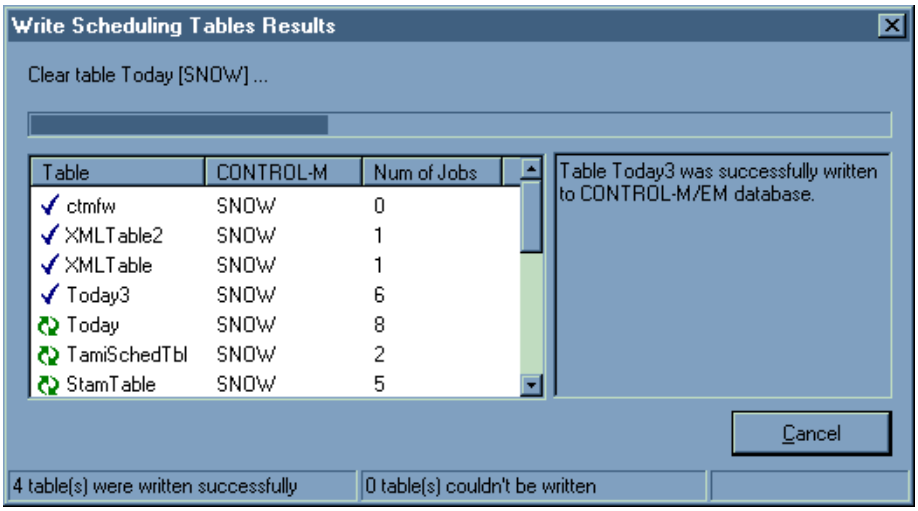
4 Click **Write**. The scheduling tables are written to the CONTROL-M/EM database.

NOTE

Depending on the setting of the Resolve job's Author field conflict security field in the General panel of the Options dialog box, you may be prompted for confirmation if there are conflicts between the Author fields of the newly edited job definitions in the scheduling table and the currently logged in user in the CONTROL-M/EM database. For more information, see the Security chapter and the description of the AuthorSecurity system parameter in the *CONTROL-M/Enterprise Manager Administrator Guide*.

If no errors are detected before the write process, a summary window is displayed:

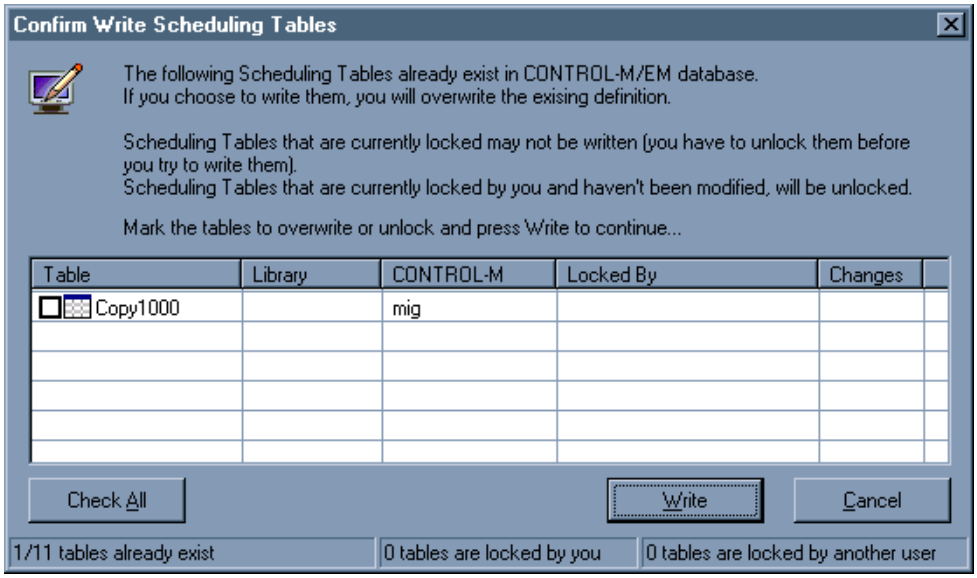
Figure 21 Write Scheduling Tables Results window



Writing multiple scheduling tables

The procedure for writing multiple scheduling tables is the same as for writing a single scheduling table, although two or more tables are selected for writing.

If you are writing multiple scheduling tables and one or more of them already exist in the CONTROL-M/EM database, the Confirm Write Scheduling Tables dialog box is displayed. In this dialog box, you must indicate whether you want these scheduling tables overwritten.



Select the check box of any scheduling table you want to overwrite and click **Write**.

You can select all listed scheduling tables by clicking **Check All**.

Viewing drafts

This section describes methods for viewing the nodes in the draft.

- Switching hierarchies
- Arranging the Flow Diagram display
- Switching between Definition and Selection modes

Switching hierarchies

To select the Application hierarchy:

1 Click the Application Tree button in the toolbar.

-or-

Choose **View => Hierarchy => Application/Group/Job**.

To select the CONTROL-M hierarchy either:

1 Click the CONTROL-M Tree button in the toolbar.

-or-

Choose **View => Hierarchy => CONTROL-M/Sched. Table/Job**.

Arranging the Flow Diagram display

After adding or modifying job dependencies, it may be necessary to rearrange the Flow Diagram to display a more direct representation of the job production flow. When selected, the Arrange All option reformats the Flow Diagram according to the following rules:

- Dependencies are displayed from top to bottom (predecessor jobs appear above successor jobs).
- Dependency line crossed as little as possible.

To rearrange the Flow Diagram:

1 Right-click anywhere in Flow Diagram (except on a job node), and select **Arrange All** from the menu.

-or-

Click the **Arrange all items in Flow Diagram** button on the toolbar.

Switching between Definition and Selection modes

The action that dragging performs is determined by whether CONTROL-M/Desktop is in Selection mode or Definition mode:

- In Definition mode, dependencies are created when dragging between nodes. Dragging does not select multiple nodes. For more information about creating dependencies, see "Creating and modifying conditions and dependencies" on page 81.
- In Selection mode, dragging the mouse enables you to select multiple nodes. However, creating dependencies (prerequisite conditions) by dragging between nodes is unavailable. For more information about selecting multiple nodes and performing action on them, see "Selecting nodes manually" on page 72.

To choose Definition mode:

Click  .

NOTE

Definition mode is selected by default when CONTROL-M/Desktop is started.

To choose Selection mode:

Click  .

Navigating in the draft

This section describes methods for navigating through the draft.

- Locating a node in the Flow Diagram using the Navigation Tree
- Expanding and collapsing
- Stepping In and Out
- Finding jobs
- Identifying predecessor and dependent jobs (Neighborhood)
- Branching in the Flow Diagram

Locating a node in the Flow Diagram using the Navigation Tree

When you click a node in the Navigation Tree, the node is selected and highlighted in Flow Diagram and Net Overview if it is part of the hierarchy displayed.

To locate a node in Flow Diagram using the Navigation Tree:

1 Right-click the node in the Navigation Tree.

2 Choose **Find In Flowdiagram** from the menu.

Appropriate levels are then expanded or collapsed, and the node is selected in the Navigation Tree, the Flow Diagram and the Net Overview:

- If the level displayed in Flow Diagram is a higher level than the one requested, CONTROL-M/EM executes the Expand function to display the node level requested and highlights the node.
- If the level displayed in Flow Diagram is the same level as the node requested, CONTROL-M/EM highlights the node.
- If the level displayed in Flow Diagram is a lower level than the one requested, CONTROL-M/EM executes the Step Out function and highlights the specified node.

NOTE

For more information about the Expand/Collapse and Step In/Step Out functions, see "Expanding and collapsing" and "Stepping In and Out" on page 65.

Expanding and collapsing

Initially, the Flow Diagram is displayed showing only the applications or CONTROL-M installations, depending upon the hierarchy selected. You can Expand each entity displayed to show all the groups in an application or scheduling tables in a CONTROL-M. You can expand it further to show all the jobs in a group or scheduling table. You can later Collapse each part of the diagram to show only the groups, applications, scheduling tables or CONTROL-M installations.

This is similar to clicking on the + and − symbols next to each branch in the Navigation Tree.

To expand or collapse the display:

Right-click a node, and select **Expand** or **Collapse** from the pop-up menu.

-or-

Double-click the node to toggle the **Expand/Collapse** function.

To expand or collapse multiple nodes in the Flow Diagram:

Hold down the **Ctrl** key and select the wanted nodes.

-or-

Right-click a node and select **Expand** or **Collapse** from the pop-up menu.

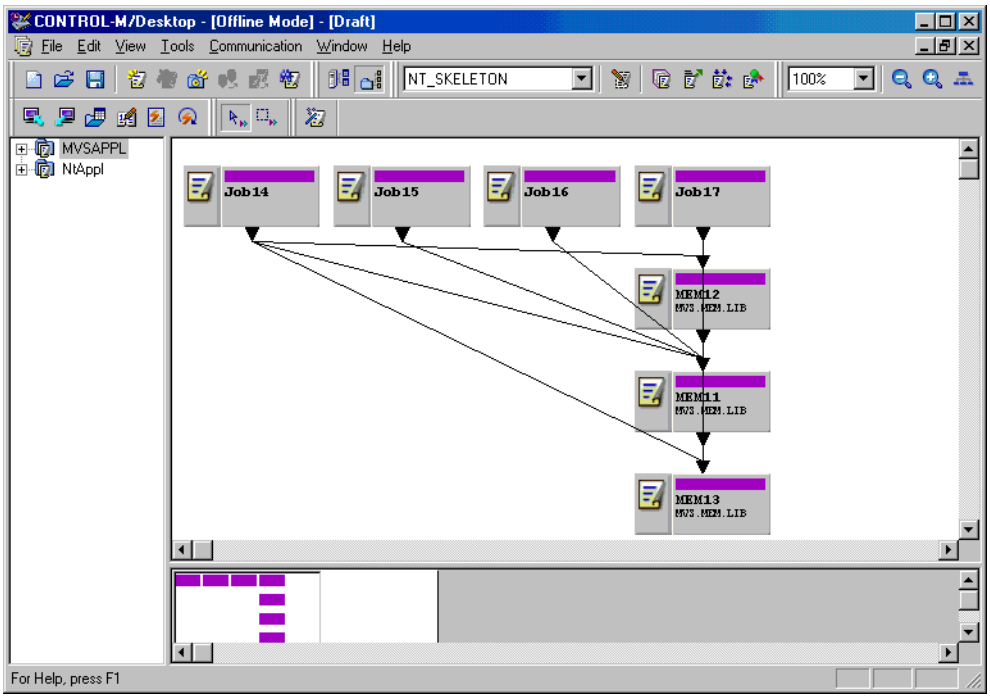
Stepping In and Out

You can focus the Flow Diagram on jobs in only selected applications, groups, CONTROL-M installations or scheduling tables. This option limits the Flow Diagram to only jobs in the selected entities.

Stepping In and Out of the Flow Diagram is not the same as Expanding and Collapsing.

- When you Expand a part of the Flow Diagram, the groups and applications or scheduling tables and CONTROL-M installations are still displayed in the window.
- When you Step In to a part of a Flow Diagram, only the nodes in the selected entities are displayed. When you Step Out, the window returns to the previous display.

Figure 22 Sample step In display



NOTE

You can Step In and Step Out to or from any level of the Flow Diagram. Multiple entities can be selected for Stepping In.

To Step In to an entity in the Flow Diagram:

Right-click the node for the entity and select **Step In** from the pop-up menu.

-or-

Select the node for the entity and click .

To Step In to multiple entities in the display:

1 Hold down the **Ctrl** key and click the wanted entity nodes.

2 Right-click the selected entities and select **Step In** from the pop-up menu.

- or -

Click .

To Step Out from the display:

Right-click anywhere in the background of the Flow Diagram, and select **Step Out** from the pop-up menu.

-or-

Click anywhere in the background of the Flow Diagram, and then click  .

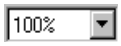
Zooming in or out

By zooming in and out of the Flow Diagram, you can change the size of the nodes in the Flow Diagram.

- Zooming out makes the nodes smaller so that you can view a larger portion of the job production flow.
- Zooming in makes the nodes larger so that you can focus on a smaller area of the flow, and more easily create multiple job dependencies.

To increase or decrease the size of the Flow Diagram:

Use any of the following methods:

- Click  or  . Repeat as necessary.
- Select the size in the Flowdiagram Zoom  box on the toolbar. You can also type in an alternative size and press **Enter**.
- Right-click anywhere in the background of the Flow Diagram, and select Zoom In or Zoom Out from the pop-up menu. Repeat as necessary.

TIP

Use the Zoom In / Out feature together with a collection of jobs in the draft (see Chapter 6, “Filtering data using collections”) to view a specific part of the job production flow in a single window.

Finding jobs

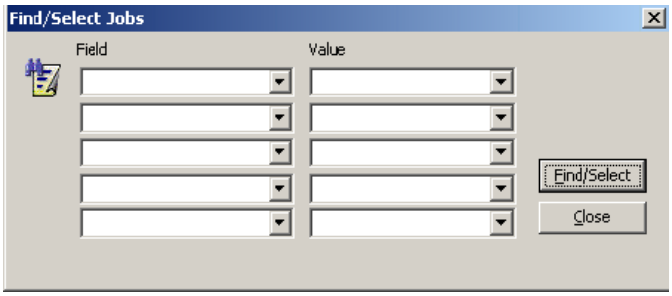
You can find nodes in the Flow Diagram using the Find / Select Jobs dialog box. The Find / Select Jobs dialog box allows you to specify combinations of job processing definition parameters (fields and values) to be used as criteria for finding and selecting nodes in the current displayed draft. Each node is highlighted in the Flow Diagram in the **Draft** window.

The Find / Select Jobs feature can be used to find any job in a draft or when a collection within a draft is displayed. However, when a collection is displayed, only jobs in the collection are searched. Jobs that satisfy selection criteria that are in the draft but are not part of the collection are ignored.

To find a job:

1 Choose **Edit => Find/Select Jobs**.

Figure 23 Find/Select Jobs Dialog Box



2 Select fields and specify their values.

Up to five fields and their accompanying values can be specified. The relationship between the fields in the Find / Select Jobs dialog box is **AND**. Specified values are case-sensitive and must be entered exactly as described in the *CONTROL-M Job Parameter and Variable Reference Guide*.

NOTE

Only one value can be specified for each parameter. However, pattern-matching strings can be used to enhance search capabilities. For details on pattern matching rules, see "Specifying Pattern-Matching strings" on page 39.

3 Click **Find/Select**.

The jobs that match the specified criteria are selected. Note that you can use the **Selection** buttons on the toolbar to toggle through the selected jobs.

Identifying predecessor and dependent jobs (Neighborhood)

The Neighborhood option identifies jobs that are predecessors or dependents of a selected job or group scheduling table and highlights the nodes of those jobs in the Flow Diagram.

The Neighborhood option is not available in any of the following instances:

- When condition nodes are displayed.
- When more than one node is selected in the Flow Diagram or Navigation Tree.

To identify applicable jobs with Neighborhood

1 Right-click a job or group scheduling table node in the Flow Diagram and choose **Neighborhood** from the pop-up menu.

-or-

Select a job or group scheduling table node in the Flow Diagram or the tree and choose **Tools => Neighborhood**.

The **Neighborhood** dialog box is displayed:

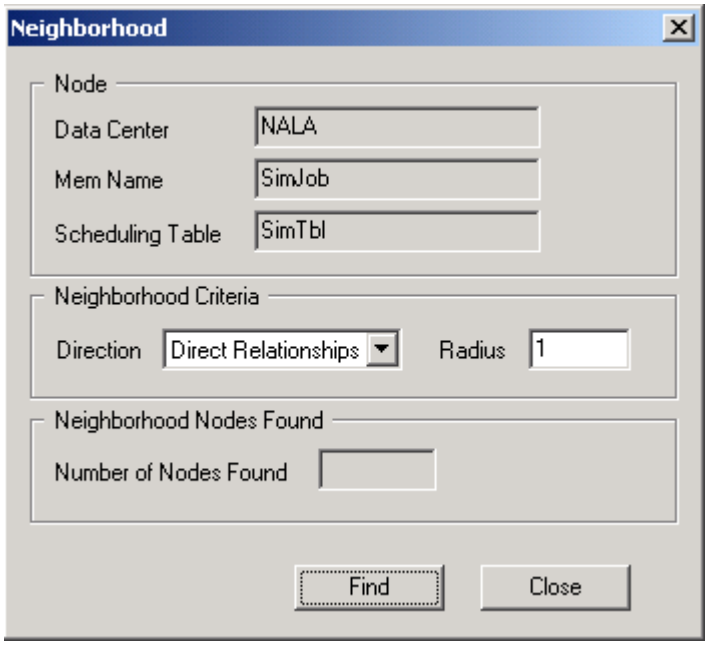


Table 8 Neighborhood dialog box elements

Element	Description	
Data Center	CONTROL-M installation in which the selected job was run. Entered automatically by CONTROL-M/EM.	
Mem Name	Mem Name of the selected job. Entered automatically by CONTROL-M/EM.	
Scheduling Table	Scheduling table of the selected job. Entered automatically by CONTROL-M/EM.	
Direction	Indicates the types of nodes to select.	
	Radial	Identifies relevant job nodes branching in all directions.
	Direct Relationships	Identifies predecessor and the dependent nodes that are directly above and below the selected node. The number of levels surveyed is determined by the **Radius** parameter.
	Predecessor	Identifies the predecessor nodes of the selected job. The number of levels surveyed is determined by the **Radius** parameter.
	Dependent	Identifies the nodes dependent on the selected job. The number of levels surveyed is determined by the **Radius** parameter.
Radius	Number of nested levels that are selected branching out from the selected node. Valid values: **1-99999**.	
Number of Nodes Found	Displays the number of nodes that are selected when **Find** is clicked.	
Find	Identifies and selects applicable job nodes.	
Close	Closes the **Neighborhood** dialog box.	

2 Select a value from the **Direction** list box to indicate the direction in which to extend the search for applicable nodes. **Direction** values are described in Table 4. I

3 Specify a numerical value in the **Radius** text box.

4 Click **Find**. The applicable job nodes in the Flow Diagram are selected.

NOTE

The **Neighborhood** dialog box is displayed until you click **Close**.

Branching in the Flow Diagram

Using the Branch Menus option in the popup menu of a node in the Flow diagram, you can display predecessor or successor jobs, jobs / scheduling tables, and (if working in Conditions mode) conditions, within the Viewpoint. Dependencies are indicated by arrows pointing in the appropriate direction.

To display predecessor or successor jobs/groups/conditions for a node:

1 From the popup menu for the node, select the Branch Menus option.

2 From the popup submenu, select either Predecessor or Successor.

The next submenu displays a list of jobs, groups, and conditions (if you are working in Condition mode).

3 Select the job, group or condition that you want to display.

The selected job, group or condition node (and relevant connected nodes) are displayed, and become the new current node.

NOTE

The Flow diagram modes set in the **Tools => Options** dialog box affect the display.

- If you are working in Condition mode, condition nodes (see page 87) are displayed in addition to job and job / scheduling group nodes, in the menu selection list. In addition, Branch menus will be available for Condition nodes. Note that if your site displays deleted Out conditions with dotted lines, any such deleted Out conditions will be displayed.
- If you are working in Expand / Collapse mode (see page 63) and you select a job, the upper nodes are automatically expanded in the Flow diagram (if need be).
- If you are working in Step In / Step Out mode (see page 65)
  - If the selected job is at the same level as the current node, the selected job is added to the job list.
  - If the selected job is at a higher level than the current node, the Flow diagram changes to the level of the Flow diagram to the selected job.

Modifying drafts

This section describes methods for modifying the contents of a draft.

Selecting nodes manually

You can select multiple nodes in the Flow Diagram or the Navigation Tree. This enables you to perform a single action that affects multiple nodes.

To select a single node:

Click the required node. Node color changes, indicating that it is selected.

To select multiple nodes using selection mode:

1 Click  to enter selection mode.

2 Place the cursor in the Flow Diagram window. Hold down the left mouse button and drag the cursor over the required nodes. A dotted rectangle is displayed as you drag the cursor. Release the mouse button to complete the select action. All nodes within the rectangle are selected.

NOTE

This option does not select condition nodes.

To select all nodes in the Flow Diagram:

This option selects those nodes currently displayed in the Flow Diagram. this option does not select all nodes in the current ViewPoint.

NOTE

Select All works in both Definition mode and Selection mode.

Choose **View => Select All**. All nodes in the displayed in the Flow Diagram are selected.

NOTE

Select All can select nodes of any type other than condition nodes.

Navigating within a set of selected nodes

If several nodes are selected simultaneously in the Flow Diagram, it is possible to navigate between the selected nodes, changing the focus from node to node.

For instructions on how to select multiple nodes, see "Selecting nodes manually" on page 72.

To navigate within a set of selected nodes

With a set of nodes selected, click the following buttons in the CONTROL-M / Enterprise Manager window toolbar (or corresponding options in the **View => Toggle Selection** menu) to navigate:

Button	Description
	Navigate to the first node in the set, making it the focused node.
	Navigate to the previous node in the set, making it the focused node.
	Navigate to the first next in the set, making it the focused node.
	Navigate to the last node in the set, making it the focused node.

Viewing only the selected nodes

You can open a special ViewPoint that contains only the selected nodes in the current, regular ViewPoint.

NOTE

If high level entities (for example, scheduling groups) are selected in addition to job nodes, all jobs in the high level entity are also considered to be selected. The resultant Flow Diagram is opened at the level of the high level node.

This type of ViewPoint is similar to regular ViewPoints. However, because it is based on a fixed set of nodes:

- filters cannot be applied
- nodes may be deleted from the ViewPoint, but not added (including during a refresh of the ViewPoint)

To view selected nodes in their own ViewPoint:

With a set of nodes selected, select the **View => View Selection** menu option. The special ViewPoint opens.

TIP

This type of ViewPoint can also be opened as a result of performing the Critical Path, Neighborhood and Enhanced Why operations.

Browsing jobs

Browse, instead of opening, a job processing definition enables you to view the job read-only, without locking its scheduling table.

TIP

This is particularly useful when working in online load mode and you do not want to interfere with other users' work.

To browse a job processing definition:

1 Right-click the job node in the Flow Diagram.

2 Select **Browse Job** from the pop-up menu. The Job Editing form is displayed but cannot be modified.

Moving jobs

The location of a job in the Navigation Tree corresponds directly to the values of certain parameters in the job processing definition (Application, Group, CONTROL-M, and Scheduling Table). You can change the values of these parameters using either the Navigation Tree or the Job Editing form:

- If you change the location of a job in the Navigation Tree, the corresponding values in the job processing definitions are automatically changed accordingly.

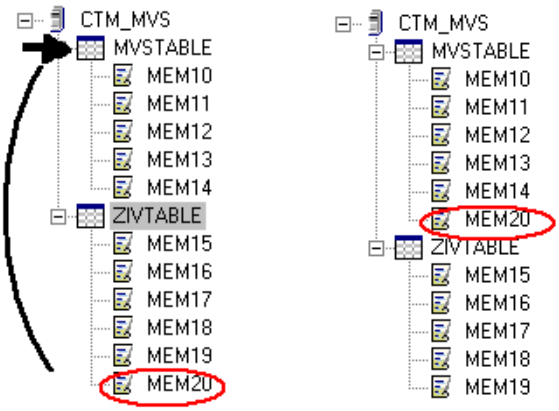
To move a job in the Navigation Tree:

Use the mouse to drag the job from one location in the Navigation Tree and drop it in a different location:

- With the Application hierarchy displayed, drag a job from one group to another. Note that the destination group does not need to be in the same application. Parameters Application and Group are automatically modified to reflect the new location of the job.

- With the CONTROL-M hierarchy displayed, drag a job from one scheduling table to another in the same or a different CONTROL-M. The CONTROL-M and Scheduling Table parameters are automatically modified to reflect the new location of the job.

Figure 24 Moving jobs between scheduling tables



NOTE

In CONTROL-M for OS/390 and z/OS, **CONTROL-M** and **Scheduling Table** are not regarded as modifiable parameters. However, CONTROL-M/Desktop allows you to modify these attributes in the same manner as any other parameter. If you drag a job from one table to another, the library name is also updated.

Moving a job using the Job Editing form

If you change the value of any of the relevant parameters in the Job Editing form, the location of the job in the Navigation Tree is automatically updated:

- When parameters Application or Group are modified, the job moves to the appropriate location in the Application hierarchy.
- When parameters CONTROL-M or Scheduling Table (or Library) are modified, the job moves to the appropriate location in the CONTROL-M hierarchy.

NOTE

You cannot move jobs in a group scheduling table to another group scheduling table or to an ordinary scheduling table. You cannot move jobs in an ordinary scheduling table to a group scheduling table.

Copying jobs

NOTE

When working in online mode, you can only modify existing jobs; you cannot create new ones.

You can copy a job processing definition from a source job and create a new, identical job processing definition. The new job is given the same name as the source job, and identical properties (conditions, resources, and so on). The new job is assigned a unique identification number, so that it can be differentiated from the source job.

The new job is created in the same group or table as the source job, and it is added in the appropriate place in the Flow Diagram.

Alternatively, you can perform a combined Edit and Copy. This operation displays the copy of the source job in the Job Editing form. You can then edit the copy of the job before you save it to the database.

NOTE

Copy and **Edit and Copy** each create only one job at a time. To create more than one job, the **Copy** or **Edit and Copy** process must be repeated, or an identical job processing definition must be created with the Mass Create feature. For more information about Mass Job Creation, see Chapter 4, "Creating and updating multiple jobs."

To perform a Copy operation on a job (local mode only)

1 Use one of the following methods to copy a job:

- Click  .
- Right-click the job node of the source job in the Flow Diagram, and select **Copy** from the pop-up menu.
- In the Flow Diagram, select the job node of the source job, and choose **Edit => Job => Copy**.

A copy of the job, with a unique identification number, is added to the Flow Diagram.

To perform an Edit and Copy operation on a job (local mode only)

1 Use one of the following methods to copy a job:

- Right-click the job node of the source job in the Flow Diagram, and select **Edit and Copy** from the pop-up menu.
- In the Flow Diagram, select the job node of the source job, and choose **Edit => Job => Edit and Copy**.

A copy of the job, with a unique identification number, is opened in the Job Editing Form.

2 Edit the copy of the job as wanted and perform a Save.

NOTE

Clicking **Cancel** in the Job Editing Form also cancels the copy part of the operation.

Deleting jobs

When you delete a job, you are actually deleting it from the draft. It is therefore automatically deleted from all views in any panes in which it appears. You can also delete an ordinary scheduling table and all its jobs, or a group scheduling table and all its jobs.

To delete an item from the Navigation Tree:

1 Select the item to be deleted in the Navigation Tree.

2 Press **Delete** or click the Delete Job button on the toolbar.

3 Confirm the deletion in the **Confirmation** window that is displayed.

To delete a job in List Mode view:

1 Click the job to be deleted.

2 Press the **Delete** key.

-or-

Click .

-or-

Right-click the selected item and select **Delete** from the menu.

3 Confirm the deletion.

To delete multiple jobs from List Mode view:

1 Use one of the following methods for selecting the items:

- Select the jobs by clicking on the first job to be delete and while pressing the **Shift** key, click the last job to be deleted.
- Click and drag a rectangle over the jobs.
- Hold down the **Ctrl** key and click the jobs.

2 Press the **Delete** key.

-or-

Click  .

-or-

Right-click the selected items and select **Delete** from the menu.

3 Confirm the deletion.

To delete a job from the Flow Diagram:

1 click the job to be deleted.

2 Press the **Delete** key, click  , or right-click the selected item and select Delete from the menu.

3 Confirm the deletion.

To delete multiple jobs from the Flow Diagram:

1 Select the jobs to be deleted by holding down the Ctrl key and clicking on each of the job nodes.

2 Press the Delete key, click  , or right-click the selected item and select Delete from the menu.

3 Confirm the deletion.

To delete all jobs in an application, group, CONTROL-M, or scheduling table from the Flow Diagram:

1 Click the appropriate application, group, CONTROL-M or scheduling table node.

2 Press the **Delete** key, click  , or right-click the selected item and select Delete from the menu.

3 Confirm the deletion.

When an upper level node is deleted, all the lower level nodes (for example, groups, tables, or jobs) are deleted.

Modifying jobs

You can view or modify job processing definitions from the Flow Diagram using the Job Editing form. Only one job can be edited at one time.

In CONTROL-M / Desktop, job processing definitions are edited using the Job Editing form. This form can be opened in a number of different ways.

For more information about this form, see Chapter 3, "Working with the Job Editing form."

To open an existing Job Editing form in the Flow Diagram:

- Double-click the job in the Navigation Tree or the job node in the Flow Diagram.

  -or-

- Right-click a job node in the Flow Diagram, and select Edit Job from the menu.

The Job Editing form is displayed. You must close the Job Editing form using the **OK** or **Cancel** button at the bottom of the form, before you can return to the original display.

To open a Job Editing form for a new job:

Choose **Edit => Job => New Job**, or click  .

NOTE

The Job Editing form for the new job is displayed with default values from the current skeleton. For more information about job skeletons, see Chapter 4, "Creating and updating multiple jobs."

The Job Editing form is displayed on top of the Flow Diagram.You must close the Job Editing form using **OK** or **Cancel** before you can return to the original window.

If you close the Job Editing form, changes are immediately applied to the draft views in the CONTROL-M / Desktop window.

For more information, see Chapter 3, "Working with the Job Editing form."

Creating dependencies

Managing conditions

Prerequisite conditions (In conditions and Out conditions) can be created, modified, and deleted from within the Flow Diagram.

NOTE

When working in online mode, prerequisite conditions cannot be created or deleted.

Creating and modifying conditions and dependencies

You can view and create job dependencies in the Flow Diagram. These dependencies are determined by IN and OUT statements defined in job processing definitions, and group scheduling tables. The following symbols are used to indicate job dependencies in the Flow Diagram:

- Connectors ▼ at the bottom of predecessor job nodes or group nodes represent the Out conditions.
- Connectors ▼ at the top of the successor job nodes or group nodes represent the job's In conditions.
- Dependency lines drawn between Connectors represent the dependencies between the various jobs and groups.

NOTE

Job dependencies can also be determined by conditions created using Do Condition parameters. These conditions are displayed using the same conventions as In and Out conditions. For more information, see Chapter 2, "Displaying conditions created by Do statements."

Additionally, dependency lines may be displayed using dotted lines. A dotted line between two jobs indicates a conditional link between the two job. This means that the jobs contain the same defined condition but one of the jobs contains one of the following parameters:

- Out conditions which delete a condition (-).
- Conditions specified with the Do Condition parameter based on conditional post processing actions.

- Optional In conditions (In conditions that are defined using Or logic, so that not all specified In conditions must exist for a job to run).

The direction of the arrows at the ends of the lines indicates the flow direction (such as the relative relationship) of the connected nodes.

NOTE

The display of dotted lines depends on settings for the following options in the **Flowdiagram - Links** panel of the Options dialog box (see Chapter 11, "Customization").

- Display Do Conditions
- Display Out Conditions with Minus Sign
- Display Optional In Condition

To create a job dependency:

NOTE

Dependencies can be created when working in local mode only.

1 Click the predecessor job node and drag the mouse to the successor job node.

CONTROL-M / Desktop creates the In / Out Connectors and Dependency line.

When you create a dependency, CONTROL-M / Desktop automatically adds the required In conditions and Out conditions to the job processing definitions.

NOTE

The name and format of new conditions conform to the value specified in the **Condition Format** field in the current Skeleton.

To display a predecessor job or successor job:

1 Right-click the connector line.

2 Select **Goto In Connector** or **Goto Out Connector** from the pop-up menu.

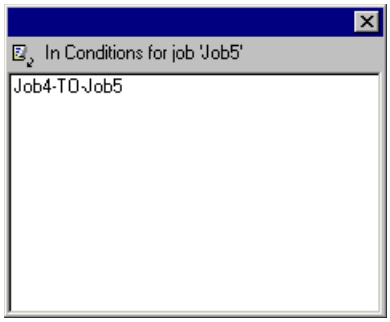
NOTE

Depending on the resolution (zoom value) of your display and the number of jobs in the Flow Diagram, certain predecessor or successor jobs may not be displayed near their related jobs or groups. This feature enables you to quickly jump to a predecessor or successor job.

To display a job's prerequisite conditions:

- Click and hold the left mouse button on the job's In Connector to display the job's In conditions.
- Click and hold the left mouse button on the job's Out Connector to display the job's Out conditions.

Figure 25 In Conditions Window



To modify or delete job dependencies:

NOTE

When working in online mode, you cannot delete a job dependency.

1. Double-click the job node to display the Job Editing form for the job.
2. Select the Conditions panel and edit the In conditions or Out conditions. For more information, see Chapter 3, "Working with the Job Editing form."

Displaying conditions created by Do statements

Display of conditions that are created using a Do Condition parameter is handled separately from conditions created using an Out statement.

To display job dependencies that rely on Do Condition parameters, select the Display Do-Conditions option in the **Flowdiagram - Links** panel of the Options dialog box. When this option is selected, CONTROL-M / Desktop displays:

- Links between job nodes that were created by Do Condition parameters (as dotted lines).
- Conditions created by Do Condition parameters, in addition to In and Out conditions, in the Delete Dependency dialog box.

For more information, see Chapter 11, "Customization."

Deleting dependencies

You can delete conditions (dependencies) between jobs by deleting the job node lines that connect dependent jobs from the CONTROL-M / Desktop Flow Diagram.

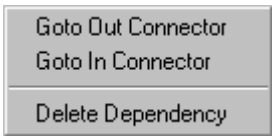
When a condition is deleted in the Flow Diagram, the appropriate In condition, Out condition and Do Condition parameter can be removed from each connected job processing definition.

To delete a dependency between jobs:

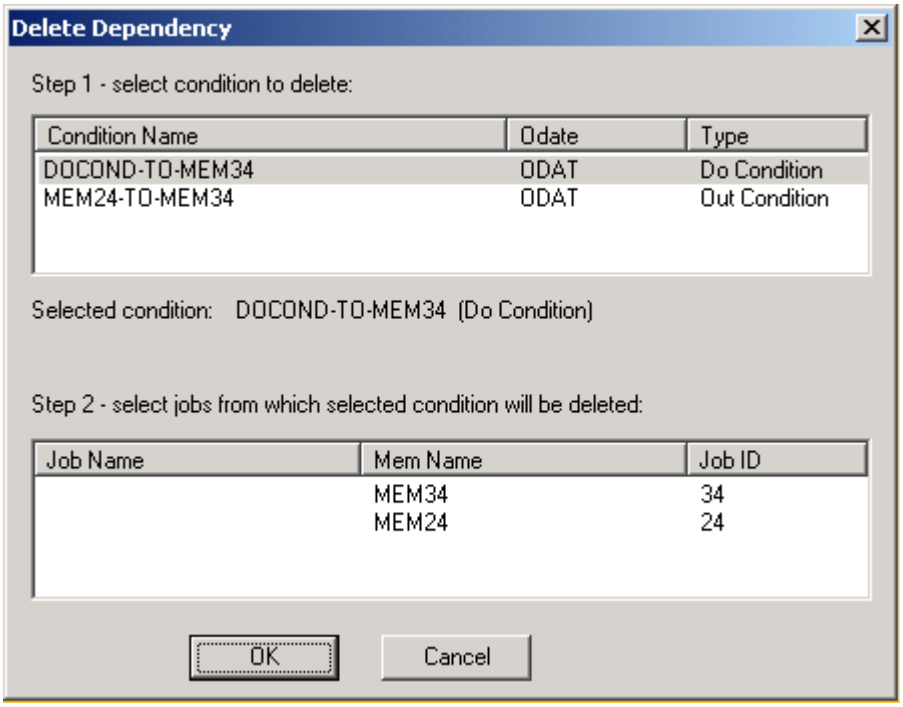
NOTE

When working in online mode, you cannot delete a job dependency.

1 Right-click the dependency line of the condition that you want to delete. The following popup is displayed:



2 Click **Delete Dependency**. The **Delete Dependency** dialog box is displayed:



NOTE

The **Delete Dependency** dialog box is displayed by default. If this default setting is changed, the dialog box is not displayed and the dependency is deleted automatically according to the behavior set using the **Flowdiagram - Links** panel in the Options dialog box. To change the behavior of the Delete Dependency feature, see page 86.

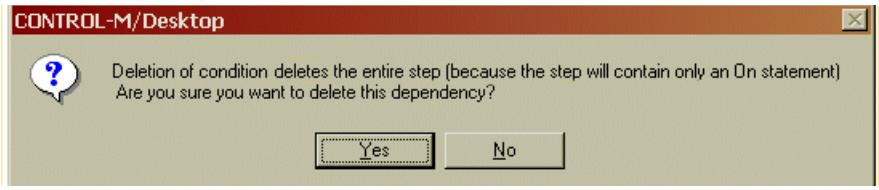
The conditions displayed in the Delete Dependency dialog box can also be customized. Conditions created by Do Condition parameters can be displayed or suppressed depending on settings in the **Flowdiagram - Links** panel in the Options dialog box. To set whether or not these conditions are displayed, see page 88.

3 Select the name of the condition that you want to delete from the Condition list. The names of the jobs in which the selected condition is specified as an Out condition, an In condition, or a Do Condition parameter are displayed.

4 Select the jobs from which the selected condition is to be deleted from the Job Name list.

5 Click **OK**.

6 If the condition being deleted was created by a Do Condition parameter, and the Do Condition parameter is the last parameter in that job processing definition's step, the following confirmation dialog box appears. Click Yes to delete the dependency and the step. Clicking No does not delete the dependency.



7 The **Delete Dependency** dialog box closes, and the dependency line is deleted from the Flow Diagram.

NOTE

After deleting a condition, a dependency line is still displayed between the two nodes if the nodes are still linked by other conditions (which were not deleted).

If the Out condition was not deleted, the condition connector remains on the underside of the job node that supplied the Out condition:

NOTE

If you remove an Out condition from a job, the jobs for which it is an In condition do not run.

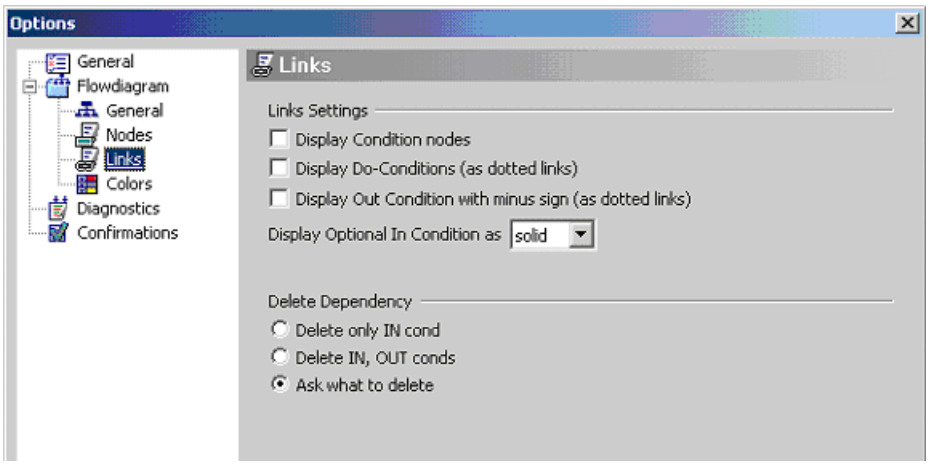
Example: Multiple In conditions sharing the same Out condition

Condition C1 is an Out Condition for **Job_A** and an In condition for jobs **Job_B**, **Job_C**, and **Job_D**. You no longer want C1 to be an In condition for **Job_D**. You must remove C1 only from **Job_D**.

In this case, you should not remove the C1 Out condition from **Job_A**. If you do this, other jobs (**Job_B** and **Job_C**) are also affected.

To modify Delete Dependency behavior

1 Click **Tools => Options** to display the **Options** dialog box and select the **Flowdiagram - Links** panel:

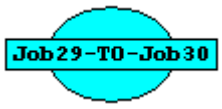


2 Select the required Delete Dependency action from among the three options in the Delete Dependency field:

Option	Description
Delete only IN cond	Deletes only the In condition, when **Delete Dependency** is selected from a dependency line popup menu. The Out condition in the predecessor job is not affected.
Delete IN, OUT conds	Deletes both the In condition and the Out (or Do Cond) condition, when **Delete Dependency** is selected from a dependency line popup menu.
Ask what to delete	Displays the **Delete Dependency** dialog box. Default.

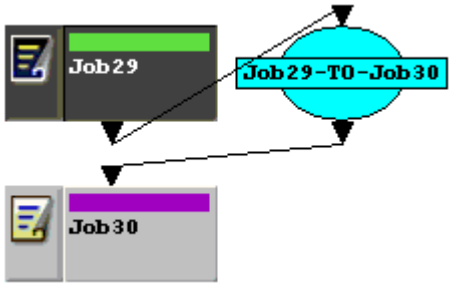
Condition nodes

Prerequisite conditions can be displayed as separate nodes in the Flow Diagram. When displayed, conditions appear as elliptical icons (condition nodes) linked to the various types of nodes in the Flow Diagram.



Condition nodes describe dependencies between jobs. They are most useful when viewing a small number of jobs. For example, a condition node is displayed between two scheduling table nodes when one or more jobs in one scheduling table are dependent on one or more jobs in the other scheduling table.

Figure 26 Condition nodes

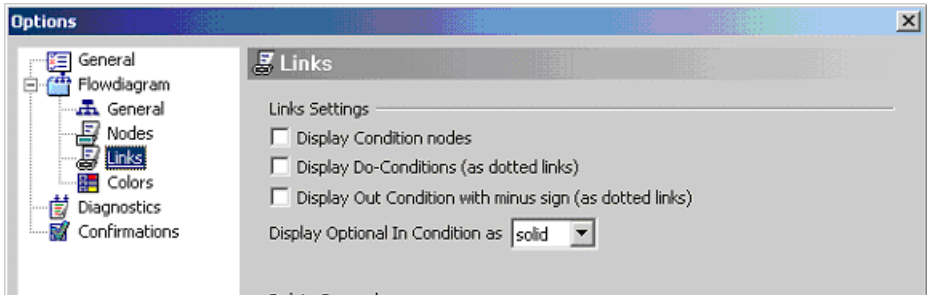


NOTE

The Expand function is not available when condition nodes are displayed. In this case, you can use only the **Step In** and **Step Out** functions to move up and down the node hierarchy.

To display Condition nodes:

1 In the Flow Diagram window, click **Tools => Options**, and select the **Flowdiagram - Links** panel.



2 Select the Display Condition nodes checkbox.

NOTE

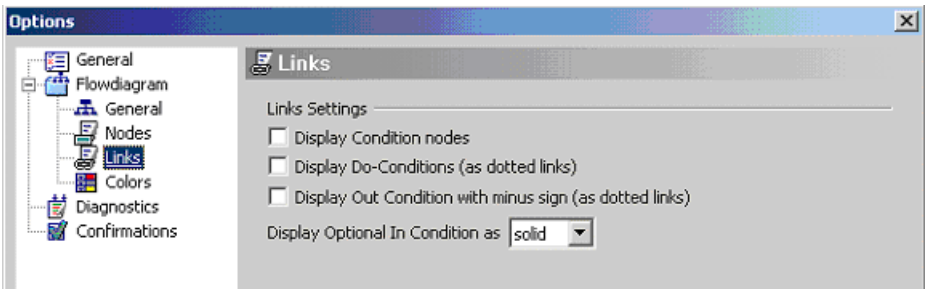
When the **Display Condition nodes** check box is selected, the **Expand-Item** and the **StepInto-Item** options in the **Flowdiagram - Nodes** panel are not available.

Condition nodes can also be created using the drag and drop function (in local mode). If a dependency is created by dragging a connecting line from one job node to another while condition nodes are displayed, a new condition node is displayed automatically on the connecting line.

Conditions created or deleted by Do Condition parameters (instead of In and Out statements), and their corresponding links, can be displayed or suppressed in the Flow Diagram according to options set in the **Flowdiagram - Links** panel of the Options dialog box.

To display condition nodes and links created by Do Condition parameters:

1 Click **Tools => Options** and select the **Flowdiagram -Links** panel.



2 Select the **Display Do-Conditions (as links or nodes)** checkbox.

Working with group scheduling tables

Group scheduling tables can be created (in local mode only), modified, and deleted in the Flow Diagram graphical environment.

Creating group scheduling tables

You can create new group scheduling tables in the Flow Diagram when working in local load mode. Processing parameters from the current skeleton are copied to the new group scheduling table (see "Skeletons" on page 30). Skeletons do not contain Schedule Tag definitions, so you must define at least one Schedule Tag for a new group scheduling table.

NOTE

CONTROL-M/EM does not support definition of group scheduling tables for CONTROL-M for OS/390 versions earlier than 6.0.00.

To create a new group scheduling table:

NOTE

When working in online mode, you cannot create a group scheduling table.

1 Choose **Edit => Scheduling Group => New**, or click  .

NOTE

The Group Editing form for a new group scheduling table is displayed with the default values taken in the current skeleton. For more information, see "Skeletons" on page 30.

To edit an existing group scheduling table:

1 Double-click the group scheduling table node or choose **Scheduling Group=>Edit**.

The Group Editing form is displayed over the Flow Diagram. After making changes, close the Group Editing form using **OK** or **Cancel**.

If you close the Group Editing form, specified changes are immediately applied to the draft views in the CONTROL-M/Desktop Draft window.

For more information, see Chapter 5, "Working with the Group Editing form."

Deleting group scheduling tables

Use one of the following methods to delete a group scheduling table:

- Select the group scheduling table node, and choose **Edit => Scheduling Group => Delete.**
- Select the group scheduling table node, and click  .
- Right-click the group scheduling table node, and select **Delete** from the pop-up menu.

Printing a draft

Printing a draft enables you to print the production flow on paper. The printed pages are labelled so that you can easily assemble the pages side-by-side in the correct order, in a poster-like format.

The printout is generated to match the draft as it is currently displayed. For example, the resolution of the printout is determined by the resolution on your screen. You can adjust the resolution, and subsequently the amount of information printed on each sheet of paper, by zooming in or zooming out of the Flow Diagram.

The printout can also include an index of all the nodes displayed in the production flow. The index is printed as the last page, after the graphical representation of the production flow.

The following topics are described below.

Previewing a draft

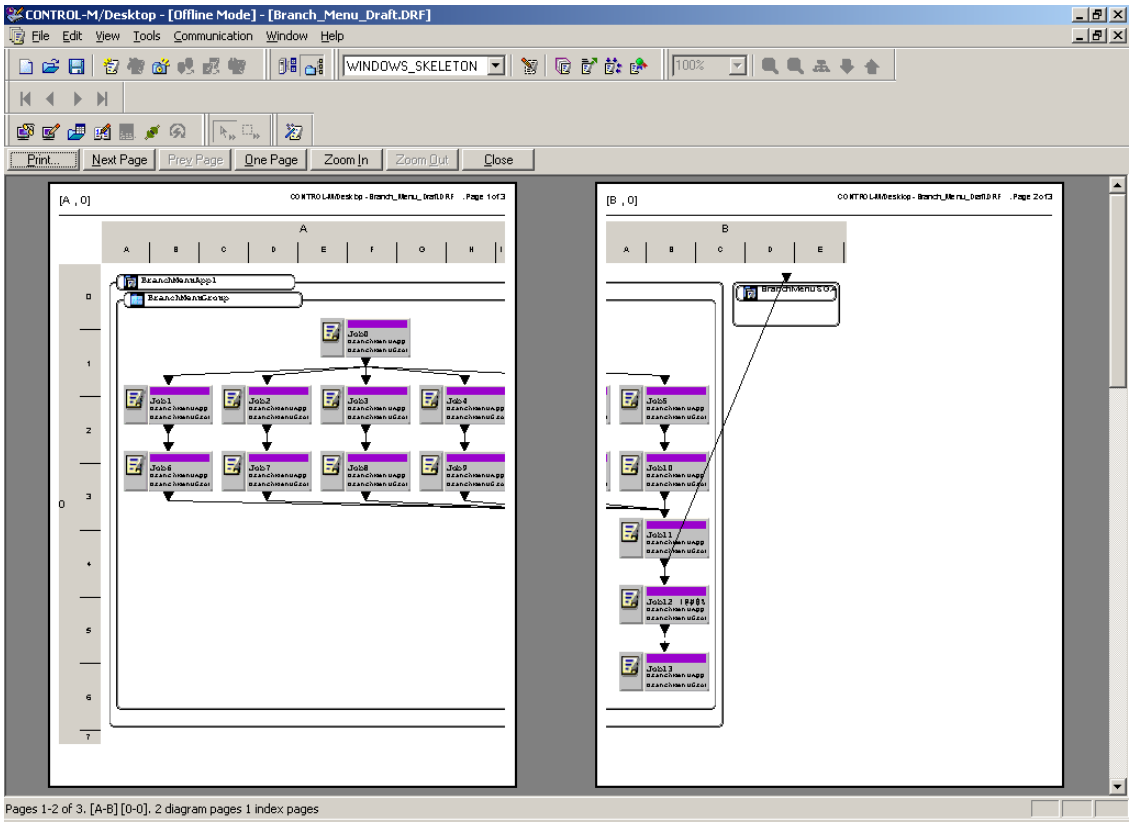
Before printing, preview the production flow to make sure it will print as wanted.

To preview the draft

1 Display the draft you want to print.

2 Choose **File => Print Preview**. The Print Preview window is displayed, displaying a graphical representation of how the draft will print.

Figure 27 Print Preview window



Working with the Print Preview window

Rulers

Rulers are located on the left and top areas of the Print Preview window. The marks on the rulers indicate relative distance, not inches or centimeters. Use the marks to locate specific nodes. The rulers can also appear on the draft printout.

Columns are labelled alphabetically from right to left, and column numbering begins with **A**. Rows are labelled numerically from top to bottom, and row numbering begins with **0**.

Pages are labelled:

- alphabetically in the order they should be assembled horizontally (A, B, C, and so on)
- numerically in the order they should be assembled vertically (0, 1, 2, 3, and so on)

EXAMPLE

- **B.A** corresponds to the first column on the second page horizontally.
- **3.2** corresponds to the second row on the third page vertically.

Status bar

The Print Preview window status bar provides additional information to aid in navigating the window.

Table 9 Status Bar Information

Measure	Description
Pages	Page(s) currently displayed
of	Total number of pages
diagram pages	Number of pages in the draft
index pages	Number of pages in the index

Available actions

From the Print Preview window, you can perform any of the following actions.

Table 10 Print Preview Actions

Click...	To...
File => Print Setup	Change settings before printing. For more information, see "Adjusting print settings" on page 95.
Print...	Open the Print window and print the draft. For more information, see "Printing the draft" on page 96.
Next Page	Display the page(s) after the currently displayed page(s).
Prev Page	Display the page(s) preceding the currently displayed page(s).
Two Page / One Page	Toggle between a one-page view and a two-page view.
Zoom In	Display the current page(s) at a larger magnification.
Zoom Out	Display the current page(s) at a smaller magnification.
Close	Close the Print Preview window and returns to the main CONTROL-M / Desktop window.

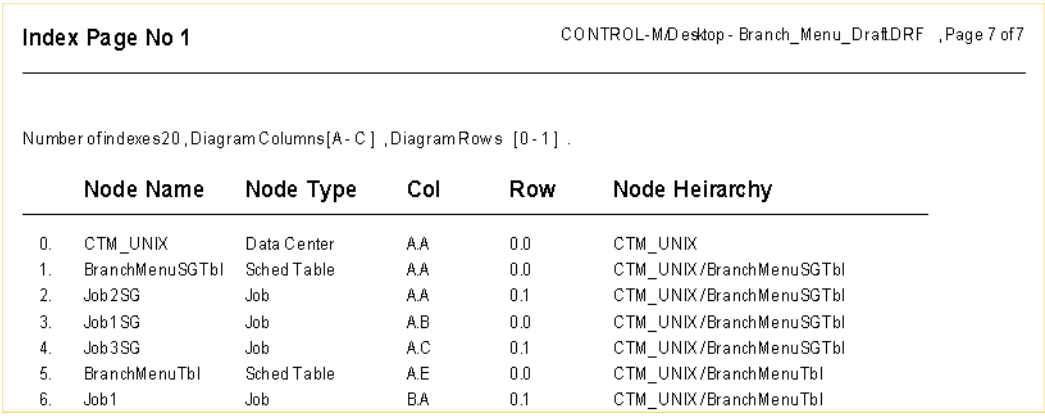
Index

An index describing the contents of the current draft can be displayed in the Print Preview window. When printing the draft, the index can be printed also. The index display can be toggled on and off using the Index Table option from the Print Setup dialog box (**File => Print Setup**).

The first line of the index summarizes the number of nodes, columns and rows in the draft.

Figure 28 illustrates a sample index. Table 11 describes the columns of the index.

Figure 28 Sample index



Index Page No 1 CONTROL-M/Desktop - Branch_Menu_Draft.DRF , Page 7 of 7

Number of indexes 20 , Diagram Columns [A - C] , Diagram Rows [0 - 1] .

	Node Name	Node Type	Col	Row	Node Heirarchy
0.	CTM_UNIX	Data Center	A.A	0.0	CTM_UNIX
1.	BranchMenuSGTbl	Sched Table	A.A	0.0	CTM_UNIX/BranchMenuSGTbl
2.	Job2SG	Job	A.A	0.1	CTM_UNIX/BranchMenuSGTbl
3.	Job1SG	Job	A.B	0.0	CTM_UNIX/BranchMenuSGTbl
4.	Job3SG	Job	A.C	0.1	CTM_UNIX/BranchMenuSGTbl
5.	BranchMenuTbl	Sched Table	A.E	0.0	CTM_UNIX/BranchMenuTbl
6.	Job1	Job	B.A	0.1	CTM_UNIX/BranchMenuTbl

Table 11 Index columns

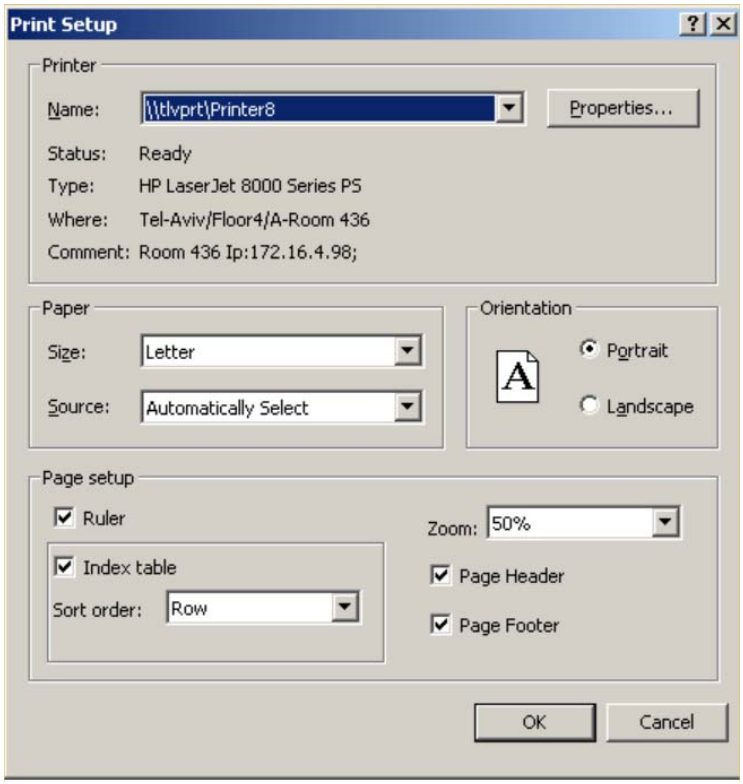
Column	Description
Node Name	The job name of the node.
Node Type	Type of the node (for example, Application, Data Center, Job).
Node Hierarchy	Full path indicating where the node is displayed in the Flow Diagram hierarchy.
Column	The column of the draft in which the node is displayed. Column numbering begins with **A**, and is displayed in the following format: `x.y` *x* is a letter representing the current page in the order the pages should be assembled horizontally. *y* is a letter representing the current column on the page. Example: B.A corresponds to the first column on the second page horizontally.
Row	The row of the draft in which the node is displayed. Row numbering begins at 0, and is displayed in the following format. `m.n` *m* is a number representing the current page in the order the pages should be assembled vertically. *n* is a number representing the current row on the page. Example: 3.2 corresponds to the second row on the third page vertically.

To sort the index table in a different order, use the Sort Order field in the Print Setup dialog box.

Adjusting print settings

1 Display the draft.

2 Choose **File => Print Setup**. The Print Setup window is displayed.



3 Change settings as wanted. Settings for printing a draft are described in Table 12.

4 Click **OK**.

Table 12 Draft-specific print settings

Parameter	Description
Ruler	If the ruler should be printed at the top and the left side of the draft.
Index table	If the index should be printed at the end of the draft. The index can only be printed if rulers are printed.
Sort order	Sort order. The index can be sorted by node name, type, column, row, and hierarchy.
Zoom	Magnification percentage of the screen, or indication that the zoom should be the same zoom factor as the display.
Page Header	If the page header should be printed.
Page Footer	If the page footer should be printed.

Printing the draft

The Print function divides the area contained in the draft into pages. Each page corresponds to part of the diagram that is displayed on your monitor.

NOTE

Settings which affect how the draft itself is displayed are unavailable.

To print the entire draft

1 Display the draft.

2 Choose **File => Print** to display the Print window and click **OK**.

To print selected pages of the draft

1 Display the draft.

2 Choose **File => Print** to display the Print window.

3 In the Print window, select the **Pages** option in the **Print Range** section of the Print window.

4 In the **from** and **to** text boxes, enter numbers of the first and last pages in the range of pages you want to print and click **OK**.

Chapter 3

Working with the Job Editing form

In CONTROL-M / Desktop, the editing of job processing definitions is performed using the Job Editing form. The following are the formats of the Job Editing form:

- Window Format
  When you choose **View => List/Job Editing Form** and click on the job in Tree view in the left pane, the Job Editing form is displayed. When using this format, you can move between job processing definitions by clicking jobs in the tree without closing and opening the form for each job.

  If modifications are made to the form in this format, select **Apply** at the top of the form to save the changes before selecting the next job from the tree or changing views. Select **Cancel** to undo the changes.

- Dialog Box Format
  If the Job Editing form is opened by any of the other methods (listed below), it is displayed as a separate dialog box. When displayed in this format, the Job Editing form may need to be closed before you perform certain processes. If modifications are made to the form, click **Save to Draft** (or **Save to Database** if working in online load mode) on the bottom of the form.

To open a Job Editing form for an existing job:

Use any of the following methods to open the Job Editing form:

- Double-click on the job name or icon in Tree view under Flow Diagram format (**View => Flowdiagram**).
- Double-click on the job in List view.
- Double-click on the job node in Flow Diagram view.
- Right-click on the job node in Flow Diagram view, and select Edit Job from the pop-up menu.

To open a Job Editing form for a new job:

Choose **Edit => Job => New Job** from the menu bar or click  .

NOTE

If you want CONTROL-M / Desktop to perform validity checks each time you select the **Apply**, **Save to Database**, or **Save to Draft** button on the Job Editing form, choose **Tools => Options** and select the **Always check the validity of jobs** check box in the **General** panel. For more information, see Chapter 11, "Customization."

Job Editing form layout

Each panel of the Job Editing form is used to define a certain type of parameter. Table 13 describes the panels of the Job Editing form.

NOTE

Apostrophes are not supported in the Job Editing form. Do not include apostrophes in any values entered in the Job Editing form.

Figure 29 Job Editing form

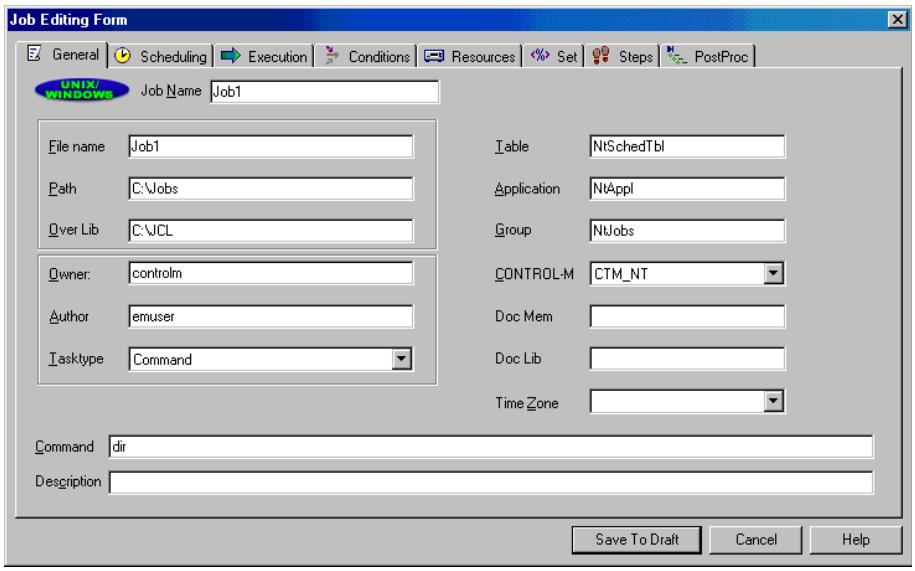


Table 13 Job Editing form panels

Panel name	Description
General	What the job does and where its script is located.
Scheduling	When and / or how often the job should be scheduled for submission.
Execution	Parameters related to job execution and accompanying processes.
Conditions	Prerequisite conditions which must be satisfied before job submission, and conditions to be added / deleted when the job is successfully completed.
Resources	Quantitative and Control resources required for job submission.
Set	AutoEdit variables to be set when the job is submitted.
Steps	Conditional post-processing instructions.
PostProc	“Shout When” and Sysout-handling post-processing instructions.
Tags Selection	Schedule tags to be applied to jobs in group scheduling tables.

Each of these panels is described below in detail.

NOTE

The parameters in the Job Editing form can vary depending on the CONTROL-M platform for which the job is being defined. Each parameter is described in the *CONTROL-M Job Parameter and Variable Reference Guide* and in the *CONTROL-M for OS/390 and z/OS User Manual*.

Additional panels may be displayed in the Job Editing form for jobs whose skeleton indicates a specific application type (such as Oracle and SAP).

Undo and Redo in the Job Editing form

During the job editing process, actions in the Job Editing form can be undone (using **Ctrl-z**) or redone (using **Ctrl-y**).

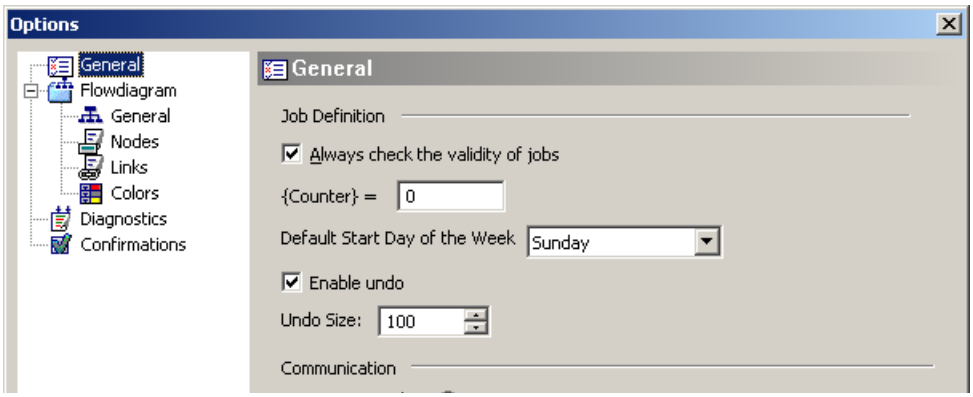
The number of actions that can be undone or redone (default: 100) is determined by settings in the General panel of the Options dialog box.

To toggle the JEF Undo/Redo feature on and off or adjust the number of actions that can be undone/redone:

Click **Tools => Options**.

The **General** panel is displayed by default.

Figure 30 Options dialog box - General panel



NOTE

Undo and redo are not confined to the panel of the Job Editing form that is currently displayed. The undo and redo features automatically move among panels in the Job Editing form.

General panel

The General panel indicates what the job does and where it is located. There are three possible versions of the General panel:

- The regular General panel, (described below).
- The General panel for MVS jobs (see page 103).
- The General panel for application-specific jobs (see page 104).

Table 14 describes the parameters in the General panel of the Job Editing form.

Figure 31 General panel of the Job Editing form

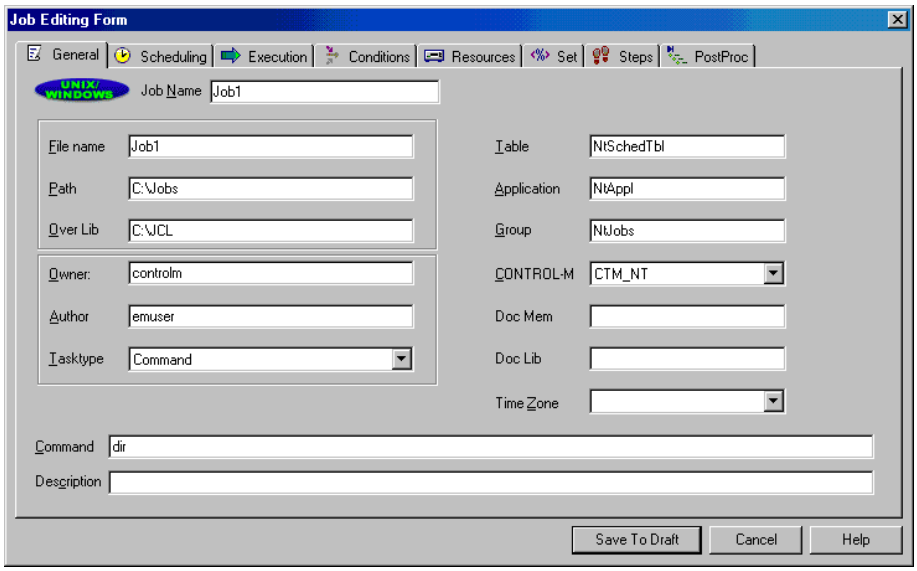


Table 14 General panel parameters (Part 1 of 3)

Parameter	Description
Job Name	Name of the job. (Text)
File Name	Name of the file that contains the job Script. (Text) **Note:** This parameter is called Memname when specified in utilities of CONTROL-M / EM or CONTROL-M.
Path	Full path for the file that contains the job script. (Text) **Note:** This parameter is called Memlib when specified in utilities of CONTROL-M / EM or CONTROL-M.
Over Lib	Name of the library / directory to use instead of the library / directory specified in the Path field. (Text)
Owner	Owner (user ID) of the job. This parameter is used by the CONTROL-M security mechanism. (Text)

Table 14 General panel parameters (Part 2 of 3)

Parameter	Description	
Author	Original author of the job. (Text) If defining a new job definition while CONTROL-M/Desktop is not currently connected to a GUI Server, the Author field is displayed as <username> until the job definition is written to CONTROL-M/EM, at which time your user ID is saved in the Author field. **Note**: The Author field may be unavailable depending on the value of the AuthorSecurity system parameter, and if you are not a CONTROL-M/EM administrator. For more information, see the Security chapter and the description of the AuthorSecurity system parameter in the ***CONTROL-M/Enterprise Manager Administrator Guide***.	
Task Type	Type of the job (task) to be performed by CONTROL-M. Valid values are: Job, Detached Job, and Command. (List)	
	Command	The job runs the command in the **Command** parameter.
	Detached	Detached job in OpenVMS
	Dummy	The job does not run but does its preprocessing and post processing. It is used to check job flow.
	Job	A normal job that submits the file specified in **File Name** to the operating system.
	External	A job that runs on an external application, such as SAP or Oracle Applications.
	Group	A group scheduling table. This option is displayed under Task Type only on the Group Editing form.
Table	Name of the scheduling table to which the job belongs. Together with parameter CONTROL-M, this determines the position of the job in the CONTROL-M/Scheduling Table hierarchy. (Text)	
Application	Name of the application to which the job's group belongs. Together with parameter Group, this determines the position of the job in the Application/Group hierarchy. (Text)	
Group	Name of the group to which the job belongs. Together with parameter Application, this determines the position of the job in the Application/Group hierarchy. (Text)	
CONTROL-M	Name of the CONTROL-M to which the job belongs. Together with parameter Scheduling Table Name, this determines the position of the job in the CONTROL-M/ Scheduling Table hierarchy. (Text)	
Doc Mem	Name of the file/member in which the documentation resides. This can be viewed using the Documentation option from the Job menu. (Text) **Note:** To access the documentation, the user must be defined and have authorization on the CONTROL-M where the documentation resides.	
Doc Lib	Name of a library/directory containing the documentation file. (Text) **Note:** To access the documentation, the user must be defined and have authorization on the CONTROL-M where the documentation resides.	

Table 14 General panel parameters (Part 3 of 3)

Parameter	Description
Time Zone	Indicates the time zone used to calculate when the job should run.
Command	Text of the command line to be submitted for the job when the Task Type parameter is Command. (Text)
Description	Description of the job. (Text)

General panel (MVS)

The General panel indicates what the job does and where it is located.

NOTE

Users of CONTROL-M for z/OS version 6.2.00 or higher may have parameters available that are not shown in Figure 32. For more information about these parameters, see Table 15.

Figure 32 General panel (MVS)

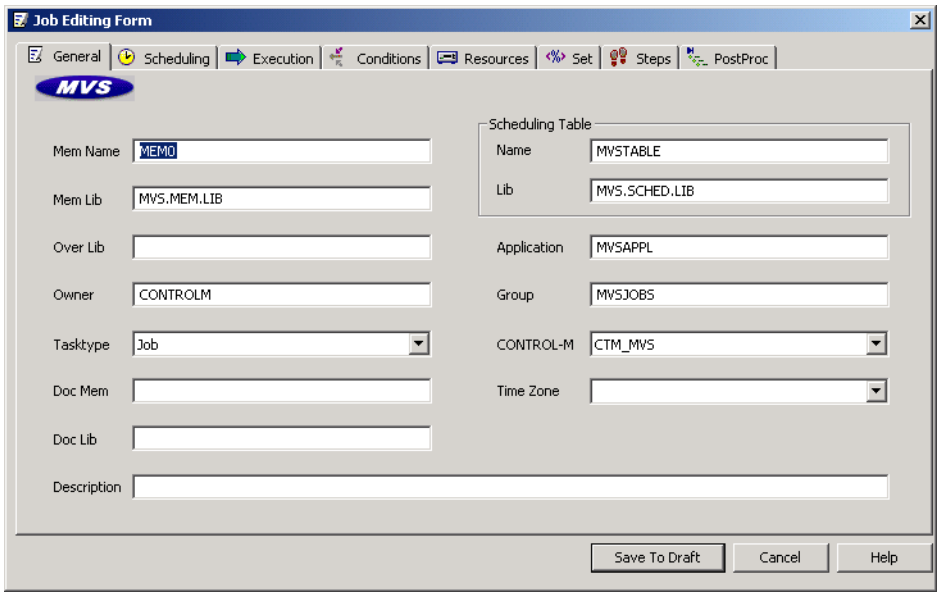


Table 15 General panel parameters (Part 1 of 2)

Parameter	Description
Mem Name	Name of the member that contains the job JCL. (Text)
Mem Lib	Name of the library that contains the job JCL member. (Text)
Over Lib	Name of an alternate JCL library. CONTROL-M searches for the file specified in parameter **Mem Name** in the **Over Lib** library before searching the **Mem Lib** library. (Text)

Table 15 General panel parameters (Part 2 of 2)

Parameter	Description
Owner	Owner (user ID) of the job. This parameter is used by the CONTROL-M security mechanism. (Text)
Task Type	Type of the job (task) to be performed by CONTROL-M. Valid values: **Batch Job** and **Started Task**. For more information about Task Types, see the parameters chapter of the *CONTROL-M for OS/390 and z/OS User Manual*. **Note:** The value specified in this field is combined with the **Cyclic**, and **Emergency** check boxes in the Execution panel to determine the wanted tasktype. For more information, see "Execution panel" on page 112.
Scheduling Table Name	Name of the table that contains the CONTROL-M job processing definition. Together with parameter CONTROL-M, this determines the position of the job in the CONTROL-M / Scheduling Table hierarchy. (Text)
Scheduling Table Lib	Name of the library that contains the scheduling table. (Text)
Application	Name of the application to which the job's group belongs. Together with parameter Group, this determines the position of the job in the Application / Group hierarchy. (Text)
Group	Name of the group to which the job belongs. Together with parameter Application, this determines the position of the job in the Application / Group hierarchy. (Text)
CONTROL-M	Name of the CONTROL-M to which the job belongs. Together with parameter Scheduling Table Name, this determines the position of the job in the CONTROL-M / Scheduling Table hierarchy. (Text)
Time Zone	Indicates the global time zone used to calculate when the job should run.
Doc Mem	Name of the file / member in which the job documentation resides. (Text) **Note:** To access the documentation, the user must be defined and have authorization on the CONTROL-M where the documentation resides.
Doc Lib	Name of the library / directory containing the job documentation file. (Text) **Note:** To access the documentation, the user must be defined and have authorization on the CONTROL-M where the documentation resides.
Use In Stream JCL	Whether the job is to use a pre-coded JCL procedure. This parameter is relevant only for jobs running in CONTROL-M for z / OS version 6.2.00 and later.
Description	Short job description that appears in the Job List screen. (Text)

General panel for application-specific jobs

As of version 6.2.01, CONTROL-M / Desktop can be used to define jobs for specific applications (for example, Oracle Applications or SAP). The application type is specified in the Application Type field of the Skeleton Editor form (described in "Job skeletons" on page 148).

NOTE

Before you can create a job for a specific application, you must configure CONTROL-M to support specific application jobs. For information about configuring CONTROL-M, see the Administrator Guide for the CONTROL-M / Control Module for the relevant application.

Most parameters in the application-specific General panel are the same as those described in "General panel" on page 101.

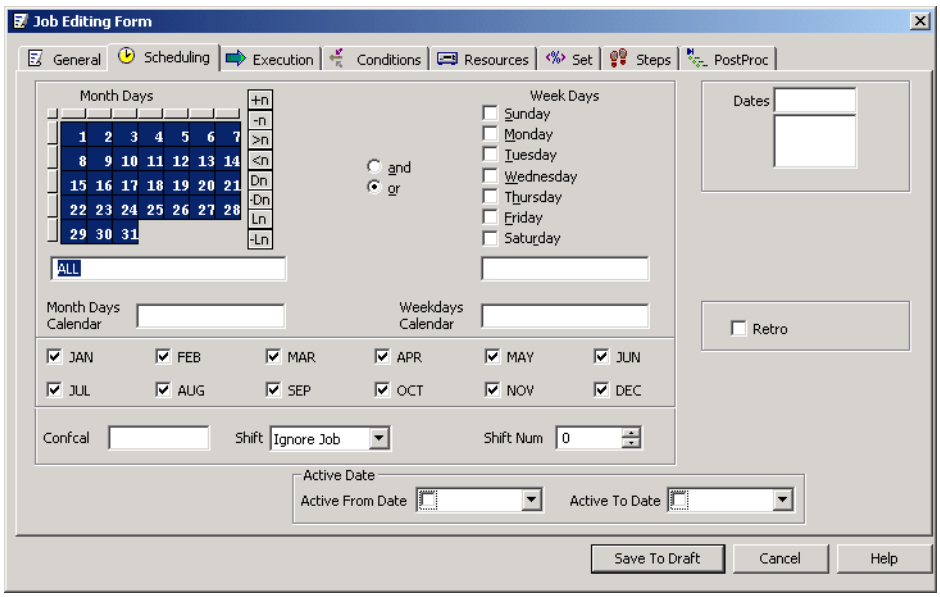
Scheduling panel

The Scheduling panel indicates when and how often a job should be scheduled for submission.

NOTE

Users of CONTROL-M for z / OS version 6.2.00 or higher may have parameters available that are not shown in Figure 33. For more information on these parameters, see Table 17.

Figure 33 Scheduling panel of the Job Editing form



Three sections of this panel are controlled by option buttons. Data can be specified for only one of these sections for each job processing definition. These panel sections are described in Table 16.

Table 16 Conditional sections of the Scheduling panel

Parameter	Description
Month Days/Week Days	Parameters for days-of-the-month and days-of-the-week scheduling.
Dates	This section contains only the **Dates** parameter.
PDS Minimum	This section contains only the **PDS** and **Minimum** parameters [MVS only].

The fields of the Scheduling panel are described in Table 17. More detailed information for certain parameters is provided in "Month Days: a detailed explanation" on page 108 and "Confcal: a detailed explanation" on page 109.

Table 17 Scheduling panel parameters (Part 1 of 3)

Parameter	Description	
Month Days	A calendar and text box used to indicate the days of each month on which the job should be scheduled. For a more detailed description of this parameter, see "Month Days: a detailed explanation" on page 108.	
Month Days Calendar	Name of a user-defined calendar for use with the Month Days parameter to indicate a set of working days. Specify the name of an existing calendar, or specify a new calendar name, and then define it at a later time. For more information, see Chapter 7, "Managing scheduling tables." In various CONTROL-M and CONTROL-M/EM utilities, this parameter is also known as **DCAL** and **DAYCAL**.	
and / or	Logical connector establishing the relationship between Month Day values and Week Day values.	
Week Days	Day(s) of the week on which to schedule the job. This parameter consists of a series of check boxes for the days of the week (Sunday through Saturday), and a text box. Values can be specified using the check boxes or the text box. **Note:** Regardless of which method is used, the specified values are displayed both in the text box and the check boxes above it.	
	Weekday Check boxes	Each day (Sunday through Saturday) is indicated by a separate check box.
	Text box	Specify the wanted days, using the numeric codes according to the site standard. Specified codes should be separated by comma. (Text)
	Example 1,2,3,4,5 would schedule the job on Monday through Friday (assuming the site standard is 0=Sunday, 1=Monday, ... 6=Saturday).	

Table 17 Scheduling panel parameters (Part 2 of 3)

Parameter	Description	
Weekdays Calendar	Name of a user-defined, week-based calendar (WCAL calendar) used together with parameter Week Days to specify a set of working days. Select from the current list, or specify a different name (this adds the specified name to the list).	
Months	Months in which to order the job.	
Confcal	Calendar used to confirm job scheduling dates. This parameter consists of the following subparameters:	
	name	Name of the calendar. Select from the current list, or specify a different name (this adds the name of the new calendar to the list). (List)
	shift	When to schedule the job if the date is not confirmed. (Option) Valid values are: ■ Ignore Job. Do not shift the job to a different date. The job is not scheduled. ■ Next Day. Shift to the next working date. ■ Prev Day. Shift to the previous working date. ■ No Confcal. Tentatively schedule the job for the current day (even if not a working day). Additional shifting may or may not be performed, depending on the value indicated in the **Shift Num** box.
	See "Confcal: a detailed explanation" on page 109 for a detailed explanation of Confcal and the Shift functions.	
Shift Num	The number of working days that a job can be shifted. Values from -62 to 62 can be entered. This function is also called **Extended Shift**. [MVS only]	
Dates	Dates on which to order the job. Valid values are 4-character dates, in mmdd or ddmm format (depending on the site standard). Dates are inserted into the list separately, followed by the Enter key. A maximum of twelve dates can be specified. If more dates are required, use a calendar.	
Retro	Indicates whether the job should be scheduled for possible execution after its original scheduled date has passed.	
Statistics Calendar	Name of the CONTROL-M periodic calendar in which statistics relating to the job are collected. This parameter is relevant only for jobs running in CONTROL-M for z/OS version 6.2.00 or later.	
Active from Date	Indicates the start of a period of time during which the job or group scheduling table can be ordered. [For MVS jobs and group scheduling tables, only]	

Table 17 Scheduling panel parameters (Part 3 of 3)

Parameter	Description
Active To Date	Indicates the end of a period of time during which the job or group scheduling table can be ordered. [For MVS jobs and group scheduling tables, only]
SAC	Whether to adjust the logical date for a job converted from a scheduling product other than CONTROL-M. This parameter is relevant only for jobs running in CONTROL-M for z/OS version 6.2.00 or later.

Month Days: a detailed explanation

Month days are specified using either a graphic calendar, or a text box. Selected values are displayed in both fields regardless of which field was used to enter the specifications. This parameter corresponds to the CONTROL-M DAYS parameter.

The fields for the Month Days parameter are described below:

Calendar

Each box (1,2, ...31) in the calendar can be toggled on and off:

- Click a date once to select it for scheduling.
- Click on an already selected date, deselects that date.

A narrow row of buttons appears above and to the left of the calendar.

- If you click on a button above the calendar, all dates directly below (that is, that day of the week) become scheduling dates.
- If you click on a button to the left of the calendar, all days in the week to the right of the button become scheduling dates.
- If you click on the button in the corner (first row and first column), all dates become scheduling dates.

NOTE

To deselect (unschedule) all dates in a column or row of the calendar, click the button for that row or column a second time.

A column of usage buttons (e.g., +n, -n) is provided to the right of the calendar. These buttons can be used to indicate additional scheduling information for jobs that are scheduled for a specific date.

Click a calendar date, then click the appropriate usage button. The selected usage symbol appears in the selected date box of the calendar. For an explanation of the various usage symbols, see **Days** parameter in the *CONTROL-M Job Parameter and Variable Reference Guide*.

EXAMPLE

Click on date box **6** and then click on the **+n** button. A **+** symbol appears in the calendar box for the 6th of the month. This symbol indicates that the job is scheduled on the 6th of the month, in addition to any scheduling dates in the DCAL calendar.

To remove a usage symbol, select the appropriate date and then click the usage button.

NOTE

As mentioned earlier, all dates defined using the calendar appear in the Text line below the calendar.

Text line

Dates can be specified in the text box below the calendar:

- Usage symbols (e.g., +, -, >) must be specified before the relevant dates.
- Dates must be separated by commas.

As mentioned earlier, all dates defined using the Text line appear in the chart above the line.

Confcal: a detailed explanation

The **Confcal** field of the Schedule panel specifies a valid calendar name of 1-8 characters.

This calendar is used for:

- Validating scheduling dates
- Determining the scheduled work day.

Jobs to be scheduled on a given day are checked against the **Confcal** calendar:

- If the day is a working day in the **Confcal** calendar, the job is tentatively scheduled on that day. (This day is referred to below as the original scheduling date.) Actual scheduling of the job is then determined by the values specified for the **Shift** and **Shift Num** parameters.

- If the day is not a working day in the **Confcal** calendar, the **Shift** parameter is checked. Depending on the **Shift** value, the job may be scheduled on an earlier day, a later day, on the original scheduling day, or it may be cancelled.

NOTE

If no **Confcal** calendar is specified, no value can be specified for subparameter **Shift**, and this field has no effect on job scheduling.

Shift and Shift Num

The Shift and Shift Num fields determine when and if a job should be scheduled. Optional.

NOTE

Shift Num is available on the Job Editing Form only when an MVS CONTROL-M platform is selected. In the CONTROL-M for OS/390 and z/OS documentation, Shift Num is referred to as “extended shift”.

Shift indicates how to shift scheduling of the job if the original scheduling day of the job is not a working day in the **Confcal** calendar.

Valid values for the Shift parameters are described in Table 18.

Table 18 Shift values

Value	Description
Ignore Job	No shifting occurs. The job is not scheduled. Default.
Next day	Job scheduling is shifted to the next working day in the **Confcal** calendar. Additional shifting may or may not be performed, depending on the **Shiftnum** value (described below).
Prev Day	Job scheduling is shifted to the previous working day in the **Confcal** calendar. Additional shifting may or may not be performed, depending on the **Shiftnum** value (described below).
No Confcal	Tentatively schedule the job for the current day (even if not a working day). Additional shifting may or may not be performed, depending on the **Shiftnum** value (described below).

Shift Num shifts scheduling of the job forward or backward the specified number of working days (as defined in the **Confcal** calendar). Valid Values for the Shift Num parameter are described in Table 19.

Table 19 Shift Num values

Value	Description
Blank	Do not reshift job scheduling. Default. If the original scheduling day is a working day, no shifting occurs. If the original scheduling day is not a working day, no shifting, beyond that indicated by the x value, occurs.
+nn	Shift job scheduling forward to next nth working day.
-nn	Shift job scheduling backward to the previous nth working day.

NOTE

If the result of shifting by the number of days specified in **Shift Num** is a day which is not allowed (meaning, –n was specified for that day in the DAYS parameter of the job processing definition), the job is shifted again to the next allowed working day (for a forward shift) or to the previous allowed working day (for a backward shift).

The interaction between the **Shift** value and the **Shift Num** value is as follows:

- If the original scheduling day of the job is a working day in the CONFCAL calendar, the **Shift** value is ignored and the **Shift Num** value determines when the job is scheduled.
- If the original scheduling day of the job is not a working day in the CONFCAL calendar, job scheduling is shifted according to the **Shift** value and then shifted again according to the **Shift Num** value (if specified) to determine when the job is scheduled.

NOTE

If the original scheduling day is not a working day and the x value is blank, the job is not scheduled (regardless of whether or not a **Shift Num** value is specified).

Execution panel

The Execution panel of the Job Editing form is used to define parameters that are related to the execution of a job and processes that accompany the job's execution.

Figure 34 Execution panel parameters

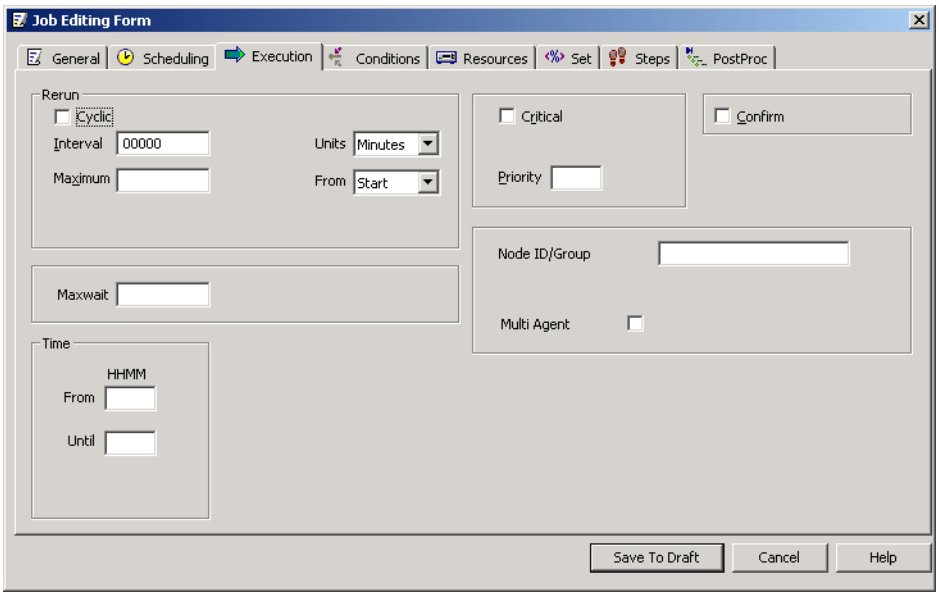


Table 20 Execution panel parameters (Part 1 of 3)

Parameter	Description
Prevent-NCT2	Indicates if NOT CATLGD 2 errors should be prevented by CONTROL-R (if installed) during started executions of a job, if it is not a restart. [MVS only] Valid values: ■ **N** – (No) – Do not perform data set cleanup before the original job run. ■ **Y** – (Yes) – Perform data set cleanup before the original job run. This value is not valid for started tasks. ■ **L** – (List) – Do not perform data set cleanup before the original job run; but generate the messages that would be required for GDG adjustment during restart. ■ **F** – (Flush) – Halt processing of the job if any data set cleanup error is detected (even if MVS would not have stopped processing the job).
Confirm	If selected, indicates that the job is not run until the administrator confirms that it should be submitted.
Priority	CONTROL-M job priority. For more information, see the *CONTROL-M Job Parameter and Variable Reference Guide*.

Table 20 Execution panel parameters (Part 2 of 3)

Parameter	Description	
Critical	Checking the check box a critical-path job in CONTROL-M. Resources for a critical job are reserved exclusively for that job. When all necessary resources are available, the job is executed. **Note:** this parameter is not relevant for MVS jobs.	
Cyclic	If selected, indicates that the current job is cyclic. **Note for MVS:** The value specified in this field is combined with the **Emergency** check box, and the Tasktype value specified in the General panel to determine the wanted tasktype. For more information, see "General panel (MVS)" on page 103.	
Emergency	The value specified in this field is combined with the **Cyclic** check box, and the Tasktype value specified in the General panel to determine the wanted tasktype. For more information, see "General panel (MVS)" on page 103. **Note:** This field is relevant only for MVS jobs.	
Rerun	Indicates that a job is rerun at an interval specified by the Interval and Maximum (Max Rerun) parameters.	
Interval	Amount of time (minutes) to wait between reruns, or between cycles of a cyclic job. Default setting is **0**. (Text)	
	Units	Specifies a unit of time for the numerical value indicated by the Interval parameter. Valid values are: ■ **Minutes** (**1-64800**) ■ **Hours** (**1-1080**) ■ **Days** (**1-45**)
	From	Determines whether the interval until the subsequent rerun of the job is calculated from the beginning or the end of the current run of the job, or (for MVS jobs) from the target time (which calculates from when the current run was scheduled). Valid values are **Start** and **End** (and for MVS: **TRGT**).
	Maximum	Maximum number od reruns of the job.
Member	Name of member to be submitted in the case of a rerun. **Note:** This field is relevant only for MVS jobs.	
Max Wait	Maximum number of days that the job can wait to be executed after its original scheduling date has passed.	

Table 20 Execution panel parameters (Part 3 of 3)

Parameter	Description	
Category	Name of a CONTROL-D Report Decollating Mission category. If specified, the Report Decollating Mission is scheduled whenever the job is scheduled under CONTROL-M.	
Time	Time limits for job submission. **Note:** The values for both time fields must be specified in **hh**:**mm** format.	
	From	Earliest submission time.
	Until	Latest submission time.
	+ *num* **days**	Number of days after the original scheduling date of the job during which execution of the job can begin (From + *num* days) or end (Until + *num* days).
Node ID/Group	Host name of the Agent platform on which the job is running. For application-specific jobs, this parameter must contain the host name of the CONTROL-M / Agent that triggers the specified application. **Note:** Not relevant for MVS jobs.	
Multi Agent	Specifies that job submission details be broadcast to all Agents within a defined Node Group. All available Agents in the Node Group run an identical job, and each such job has a unique Order ID. **Note**: Not relevant for MVS jobs.	
Due Out	Time by which the job must finish executing.	
	+ ***num*** **Days**	Number of days that job execution can be extended after the **Odat**. This subparameter is relevant only for jobs running in CONTROL-M for z / OS version 6.2.00 or later.
Scheduling Environment	Indicates the JES2 workload management scheduling environment that is to be associated with the job. [MVS only]	
System Affinity	Indicates the identity of the system in which the job must be initiated and executed (in JES2). Indicates the identity of the processor on which the job must execute (in JES3). [MVS only]	
Request NJE Node	Specifies the node in the JES network on which the job is to execute. [MVS only]	
Use In-Stream JCL	Whether CONTROL-M for z / OS uses a JCL stream to create an individual job, overriding the MEMLIB parameter value. This parameter is relevant only for jobs running in CONTROL-M for z / OS version 6.2.00 or later.	

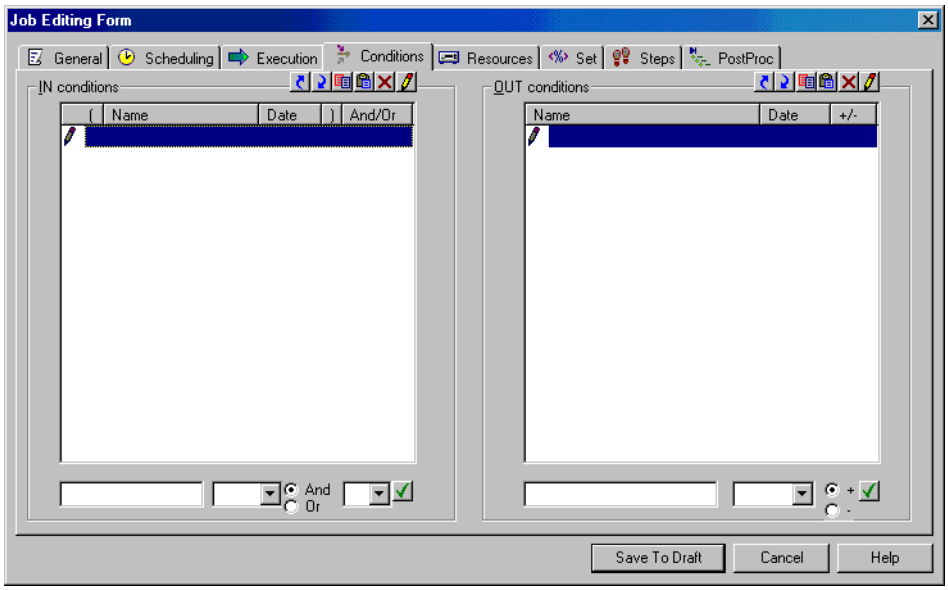
Conditions panel

Conditions panel is used to define prerequisite IN and OUT conditions. IN conditions are defined in the left side of this panel, and OUT conditions are defined in the right side of this panel.

NOTE

Users of CONTROL-M for z/OS version 6.2.01 or higher may have parameters available that are not shown in Figure 35. For more information on these parameters, see Table 22 and Table 23.

Figure 35 Conditions panel of the Job Editing form



Each half of the conditions panel consists of a list of already-defined conditions, and a text box. The text box is used for editing existing conditions or defining new conditions. When you select a condition in the list, its contents are displayed in the Text line.

After editing or creating a condition, click the check button next to the Text box to save the changes or to add the condition to the list.

NOTE

Even after a condition has been added or changed, the change can be undone or redone (if it was previously undone) using Ctrl-z and Ctrl-y. For more information, see "Undo and Redo in the Job Editing form" on page 100.

Table 21 describes the buttons that are available for each section of the Conditions panel.

Table 21 Conditions panel buttons

Button	Description
	Enter a new condition.
	Delete the selected condition.
 and 	Change the order of the list.
	Copy data.
	Paste data.

Defining IN conditions

Table 22 describes the parameters used to define IN conditions for a job.

Table 22 IN condition parameters

Parameter	Description	
Name	Name of the prerequisite condition. (Text)	
Date	4-character date reference for the condition. Valid values are:	
	date	A 4-digit date reference in the format **mmdd** or **ddmm**, depending on the site standard.
	offset	+ or - followed by a number from 0 through 999, indicating the number of days in the future (+), or in the past (-), relative to the actual order date. This value is valid only for jobs running in CONTROL-M for z/OS version 6.2.00 or later.
	ODAT	Original scheduling date of the job.
	PREV	Previous scheduling date of the job.
	NEXT	Next scheduling date of the job.
	STAT	The condition is not date-dependent.
		Note: This value is valid only for CONTROL-M/Server version 6.0.01 and above, and for CONTROL-M for OS/390 and z/OS.
	****** or $$$$**	Any scheduling date.
And/Or	Logical relationship between multiple conditions. (Option buttons)	
	Parentheses Box. Used to indicate And/Or relationships. **Note**: This parameter is relevant only for MVS jobs.	

Defining OUT conditions

Table 23 describes the parameters used for defining OUT conditions.

Table 23 OUT condition parameters

Parameter	Description	
Name	Name of the prerequisite condition. (Text)	
Date	4-character date reference for the condition. Valid values are:	
	date	A 4-digit date reference in the format **mmdd** or **ddmm**, depending on the site standard.
	offset	+ or - followed by a number from 0 through 999, indicating the number of days in the future (+), or in the past (-), relative to the actual order date. This value is valid only for jobs running in CONTROL-M for z/OS version 6.2.00 or later.
	ODAT	Original scheduling date of the job.
	PREV	Previous scheduling date of the job.
	NEXT	Next scheduling date of the job.
	STAT	The condition is not date-dependent. **Note:** This value is valid only for CONTROL-M/Server version 6.0.01 and above, and for CONTROL-M for MVS.
	****** or $$$$**	Any scheduling date.
+ / -	Indicates whether to add (+) or delete (–) the condition. (Option buttons)	

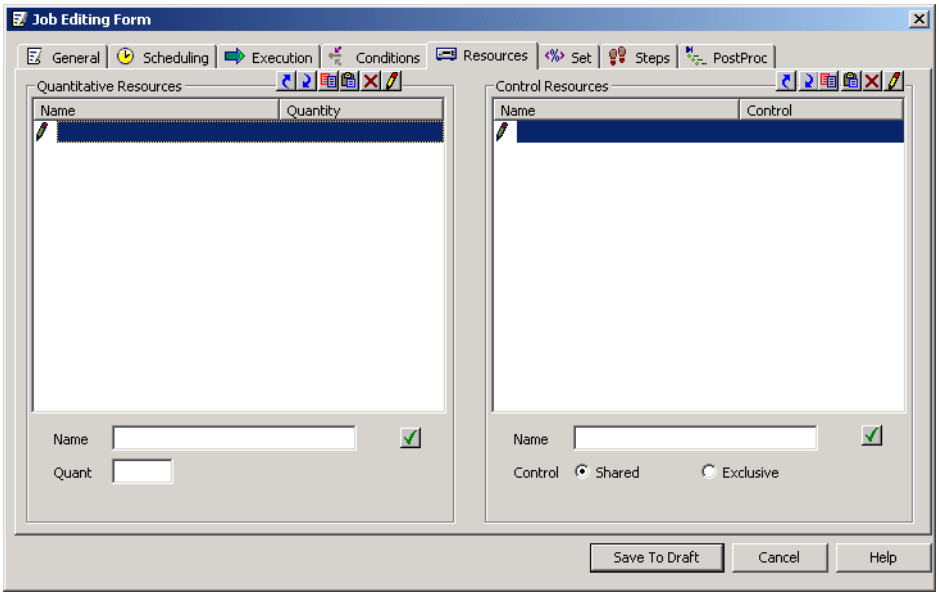
Resources panel

The Resources panel is used to define Quantitative and Control resources. Quantitative resources are defined in the left side of this panel. Control resources are defined in the right side.

NOTE

Users of CONTROL-M for z/OS version 6.2.00 or higher may have parameters available that are not shown in Figure 36. For more information on these parameters, see Table 25 and Table 26.

Figure 36 Resources panel of the Job Editing form



Each half of the resources panel consists of a list of already-defined resources, and a text box. The text box is used for editing existing resources or defining new resources. When you select a resource in the list, its contents are displayed in the Text line.

After editing or creating a resource, click the check button ✓ next to the Text box to save the changes or to add the resource to the list.

NOTE

Even after data has been added or changed, the change can be undone or redone (if it was previously undone) using **Ctrl-z** and **Ctrl-y**. For more information, see "Undo and Redo in the Job Editing form" on page 100.

Table 24 describes the buttons that are available for each section of the Resources panel.

Table 24 Resources panel – function buttons

Button	Description
	Enter a new resource.
	Delete the selected resource.
and	Change the order of the list.
	Copy data.
	Paste data.

Defining Control resources for a job

The following fields must be specified for each Control resource:

Table 25 Resources panel – Control resource parameters

Name	Name of the resource required by the job. (Text)
Shared/Exclusive	Type of control that the job must have over the resource. (Option buttons)
On Fail	Whether to keep a Control resource tied to a job if the job does not end OK. Valid values are: ■ Release – The resource is not kept tied to the job. Default. ■ Keep – The resource is kept tied to the job until one of the following occurs: — the job ends OK — the job is deleted ■ the job is forced OK This parameter is only relevant to users of CONTROL-M for z/OS version 6.2.00 or later.

Defining Quantitative resources for a job

The following fields must be specified for each Quantitative resource:

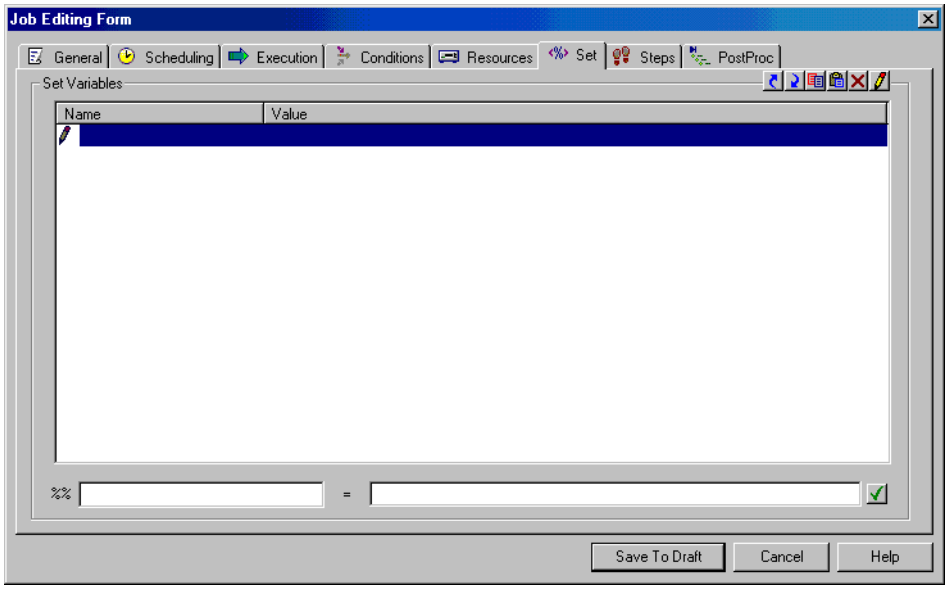
Table 26 Resources panel – Quantitative resource parameters

Name	Name of the resource required by the job.
Quantity	Quantity of the resource required by the job.
On Fail	Whether to keep the resource tied to a job if the job does not end OK. Valid values are: ■ Keep – the resource is kept tied to the job until one of the following occurs: — the job ends OK — the job is deleted — the job is forced OK ■ Release – the resource is not kept tied to the job. This is the default. This parameter is only relevant to users of CONTROL-M for z/OS version 6.2.00 or later.
On OK	Whether to keep the resource tied to a job if the job ends OK. Valid values are: ■ Release – The resource is not kept, and is returned to the total quantity available for other jobs. This is the default. ■ Discard – The resource is not reusable, meaning that the quantity of the resource is permanently removed from the total quantity available for other jobs. This parameter is only relevant to users of CONTROL-M for z/OS version 6.2.00 or later.

Set panel

The Set panel is used to specify AutoEdit variables to be resolved in the job's JCL / Script before job submission.

Figure 37 Set panel of the Job Editing form



AutoEdit variables that have already been defined for the job are displayed in the central window of this panel. Below this window, is a pair of text boxes that are used for adding new variables, for updating existing variables. To edit a variable definition, select it in the list of existing variables, and edit its contents the Text boxes below.

After editing or creating a variable, click the check button next to the Text line to save the changes and / or add the variable to the list.

NOTE

Application-specific job parameters may not be specified in AutoEdit variables. The names of application-specific job parameters are prefixed by two percent signs, the application's abbreviation and a hyphen (%%SAPR3- for SAP, %%OAP- for Oracle, and so on).

For more information about definition of AutoEdit variables, see **Do AutoEdit** in the *CONTROL-M Job Parameter and Variable Reference Guide*.

For general information about the AutoEdit facility, see the *CONTROL-M Job Parameter and Variable Reference Guide*.

NOTE

Even after data has been added or changed, the change can be undone or redone (if it was previously undone) using Ctrl-z and Ctrl-y. For more information, see "Undo and Redo in the Job Editing form" on page 100.

Table 27 describes the buttons that are available for the Set panel.

Table 27 Set panel – function buttons

Button	Description
	Enter a new variable.
	Delete the selected variable.
 and 	Change the order of the list.
	Copy data.
	Paste data.

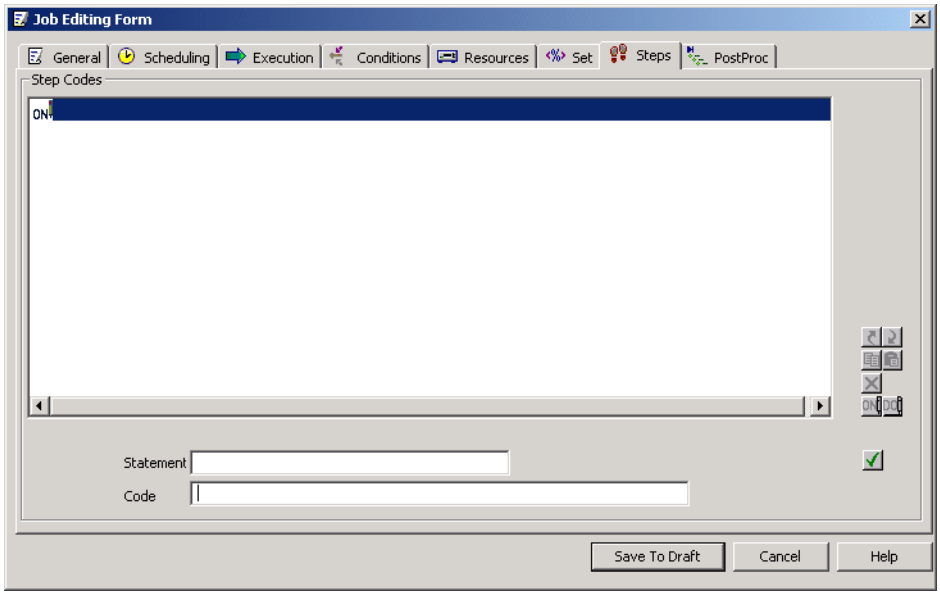
Steps panel

The Steps panel indicates conditional post processing actions to be performed, depending on the outcome of specified statements.

NOTE

The steps panel works differently for MVS jobs. For more information, see "Steps panel (MVS)" on page 128.

Figure 38 Steps panel of the Job Editing form



Each item in this panel indicates either an ON statement, or a DO statement. ON statements indicate conditions under which specified actions should be performed. DO statements indicate actions to be performed when the preceding ON statements are satisfied.

The definition line below the list of statements can be toggled between fields for ON statements and fields for DO statements.

- Table 28 describes the buttons that are available for use with Step Codes.
- Table 29 describes the fields that are used for definition of ON statements.
- Table 30 describes the fields that are used for definition of DO statements.

After editing or creating an ON statement, click the check button ✓ at the corner of the Step Codes section to save the changes and / or add the statements to the list.

NOTE

Even after data has been added or changed, the change can be undone or redone (if it was previously undone) using **Ctrl-z** and **Ctrl-y**. For more information, see "Undo and Redo in the Job Editing form" on page 100.

Table 28 Steps panel buttons

Button	Description
	Displays the DO statement definition line.
	Displays the ON statement definition line.
	Delete the selected statement.
 and 	Change the order of the list.
	Copy data.
	Paste data.

ON statement definition line

Figure 39 shows a blank set of ON statement fields. These fields are described briefly in Table 29. For more detailed information about these fields, see the *CONTROL-M Job Parameter and Variable Reference Guide*.

Figure 39 Steps panel – ON statement fields

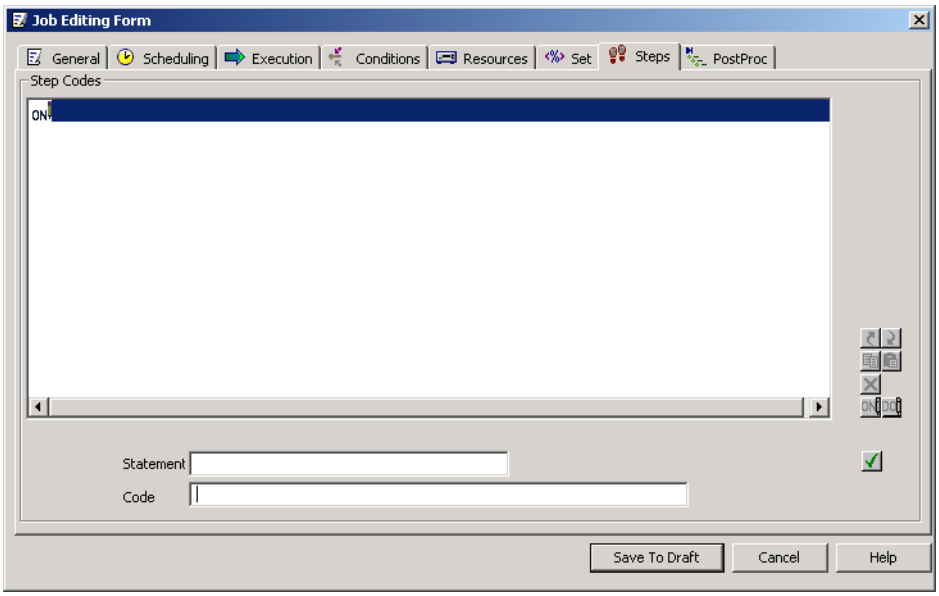


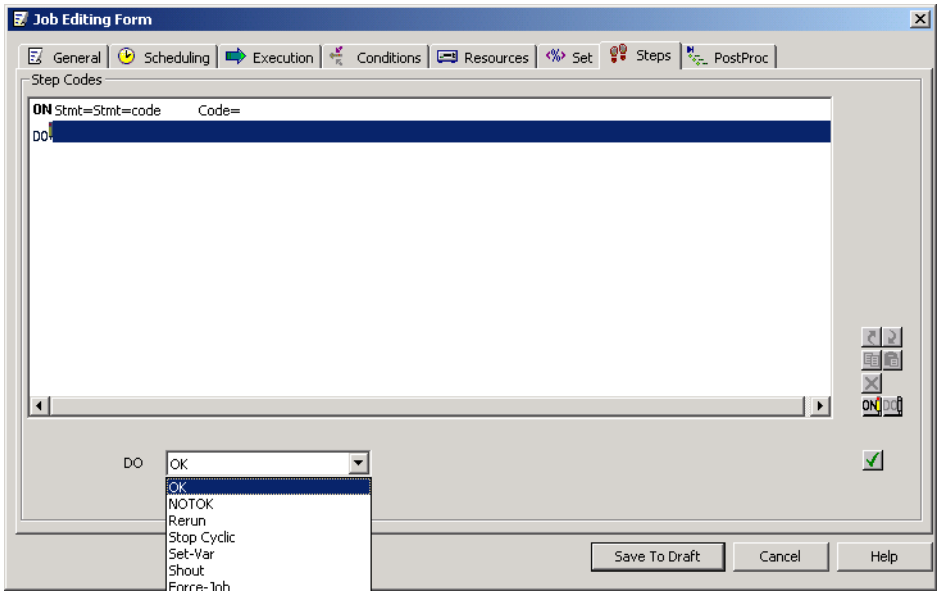
Table 29 ON statement code criteria

Box	Description
Statement	Character string that is compared with the job's log statement records.
Code	Character string that is compared with the job's log error codes.

DO Statement definition line

The DO statement definition line is displayed by clicking the DO button DO. Figure 40 displays a sample DO statement definition line.

Figure 40 Steps panel – DO statement fields



The fields displayed in this line vary depending on the selected DO action. A brief description of each DO action and its fields is supplied in Table 30. For more information about these fields, see the *CONTROL-M Job Parameter and Variable Reference Guide*.

After editing or creating a DO statement, click the check button at the corner of the Step Codes section to save the changes and / or add the statements to the list.

Table 30 DO statement parameters (Part 1 of 3)

Parameter	Description
DO OK	Sets the job's completion status to OK regardless of the job's completion status. No subparameters.
DO NOTOK	Sets the job's completion status to NOTOK regardless of the job's completion status. No subparameters.
DO Rerun	Causes the job to be rerun according to the parameters specified in the Rerun parameter. No subparameters.

Table 30 DO statement parameters (Part 2 of 3)

Parameter	Description	
DO Set-Var	Assigns a value to an AutoEdit variable. The following subparameter fields are displayed for this DO statement:	
	Name	Name of variable to be set to the specified value.
	Value	Value for the specified variable. This value can be either a constant value, or a resolvable AutoEdit Expression. This value cannot contain any application-specific job parameters. The names of application-specific job parameters are prefixed by two percent signs, the application's abbreviation and a hyphen (%%SAPR3- for SAP, %%OAP- for Oracle, and so on). For more information about AutoEdit Expressions, see the *CONTROL-M Job Parameter and Variable Reference Guide*.
	Note: This parameter is called DO AutoEdit in CONTROL-M/EM.	
DO Shout	Specifies messages to be sent ("shouted") to various destinations on various occasions. The following subparameter fields are displayed for this DO statement:	
	Destination	Destination to which the message should be sent.
	Urgency	Priority for the shout message. Select the option button the reflects the level of urgency for the specified message; **Regular**, **Urgent**, or **Very Urgent**.
	MSG	Text of the message to be sent. Use Ctrl+Enter to move to a new line.
DO Force-job	Forces a job or a complete scheduling table to be ordered under CONTROL-M regardless of the scheduling criteria. The following subparameter fields are displayed for this DO statement:	
	SCD Table	Name of the scheduling table containing the job to be forced.
	Job Name	Name of the job to be forced.
	Date	Scheduling date of the job to be forced. Valid values: **ODAT**, or a specific 4 or 6 character date reference (**mmdd**, **ddmm**, **yymmdd**, or **yyddmm** format, depending on the site standard). For MVS: Only **yymmdd** or **yyddmm** format can be used.
	Library	Name of the library containing the specified scheduling table.

Table 30 DO statement parameters (Part 3 of 3)

Parameter	Description	
DO Sysout	Specifies how the job's output should be handled. The following subparameter fields are displayed for this DO statement:	
	option	Sysout option code (list box). The following options are available: ■ **C** Change job class. ■ **F** Copy output. ■ **D** Delete output. ■ **N** Move output. ■ **R** Release for Printer.
	PRM	Relevant sysout data. The appropriate value depends on the option code above. For use with codes F, C or N. (Text) ■ For option **F**, specify the file name. ■ For option **C**, specify the New class (one character) or * to indicate the jobs original MSGCLASS. ■ For option **N**, specify the new destination (up to 8 characters).
	FROM	From class. Limits the sysout handling operation to sysouts originating in the specified class.
DO Condition	Specifies prerequisite conditions to be added or deleted. The following subparameter fields are displayed for this DO statement:	
	Name	Name of the prerequisite condition.
	Date	Date reference for the prerequisite condition.
	+ or –	These option buttons indicate whether the specified condition should be added (+) or deleted (-).
DO Mail	Sends a brief message when the specified On condition is fulfilled.	
	To	The e-mail address of the recipient of the DO Mail message.
	Regular or **Urgent**	Priority for the shout message. Select the option button the reflects the level of urgency for the specified message; **Regular**, or **Urgent**.
	Subject	A brief message that can describe the contents of a longer message.
	CC	The e-mail address of an additional recipient of the DO Mail message. Optional.
	text box	The text of the message to be sent.

Steps panel (MVS)

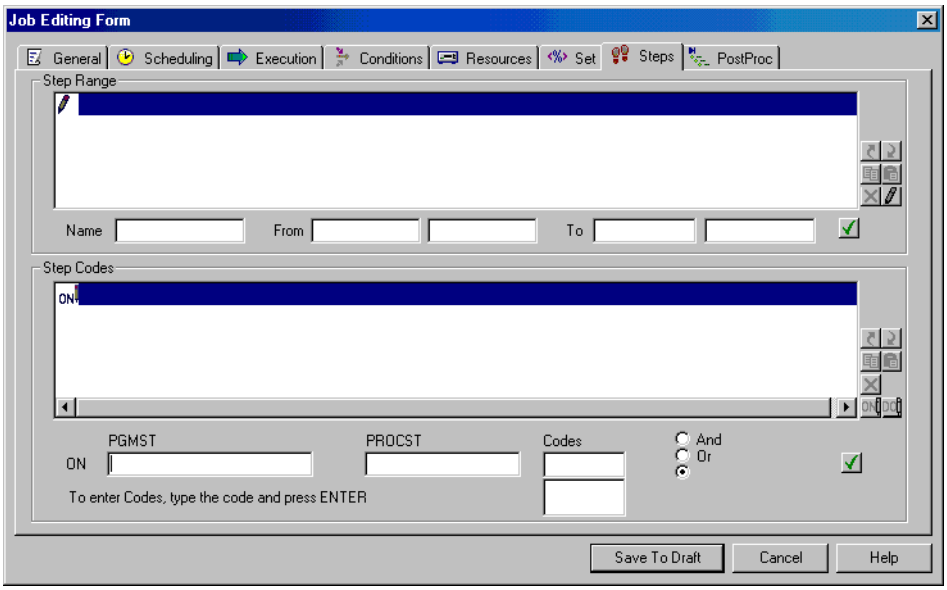
The Steps panel indicates conditional post-processing actions to be performed, depending on the outcome of specified steps.

NOTE

This panel is relevant only for MVS jobs. Post-processing for all other jobs is specified using the Steps panel described in "Steps panel" on page 123.

Users of CONTROL-M for z/OS version 6.2.00 or higher may have parameters available that are not shown in Figure 41. For more information on these parameters, see "ON statements" on page 130.

Figure 41 Steps panel of the Job Editing form (MVS)



Two types of information are specified in this panel:

- **Step Range** indicates which steps should be monitored for the specified codes.
- **Step Codes** indicates what steps codes should be handled and what actions should be performed when the specified step completion codes are detected.

Each of these types of information is described in detail in the following pages.

Step range

Each item in the step range list indicates a range of steps to be checked for specified completion codes. Specifying a step range eliminates the need to define separate postprocessing actions for each step in the range.

Figure 42 Step range fields

- Table 31 describes the fields that are used for definition of each step range.
- Table 32 describes the buttons that are available for use with Step ranges panel.

Table 31 Step range fields

Field	Description
Name	Logical name for the specified step range. (Text)
From	First step in the range. This field consists of two text boxes: ■ In the left box, specify the program (PGM) step name. (Text) ■ In the right box, optionally specify the procedure (PROC) step name. (Text)
To	Last step in the range. This field consists of two text boxes: ■ In the left box, specify the program (PGM) step name. (Text) ■ In the right box, optionally specify the procedure (PROC) step name. (Text)

Table 32 Step range buttons

Button	Description
	Enter a new step.
	Delete the selected step.
and	Change the order of the list.
	Copy data.
	Paste data.

Click the check button next to the new or updated step range, to save the changes or the new step range to the list.

NOTE

Even after data has been added or changed, the change can be undone or redone (if it was previously undone) using **Ctrl-z** and **Ctrl-y**. For more information, see "Undo and Redo in the Job Editing form" on page 100.

Step Codes

Each item in the step codes list indicates either an ON statement, or a DO statement. ON statements indicate conditions under which specified actions should be performed. DO statements indicate actions to be performed when the preceding ON statements are satisfied.

The definition line below the list of statements can be toggled between fields for ON statements and fields for DO statements.

- Table 33 describes the buttons that are available for use with Step Codes.
- Table 34 describes the fields that are used for definition of ON statements.
- Table 36 describes the fields that are used for definition of DO statements.

After editing or creating an ON or DO Action statement, click the check button ✓ at the corner of the Step Codes section to save the changes and / or add the statements to the list.

NOTE

Even after data has been added or changed, the change can be undone or redone (if it was previously undone) using **Ctrl-z** and **Ctrl-y**. For more information, see "Undo and Redo in the Job Editing form" on page 100.

Table 33 Step Codes buttons

Button	Description
DO	Displays the DO statement definition line.
ON	Displays the ON statement definition line.
✕	Delete the selected change.
↑ and ↓	Change the order of the list.
	Copy data.
	Paste data.

ON statements

In defining ON statements for jobs for CONTROL-M for z / OS version 6.2.00 or later, there are two options:

- On Stmt
- On Sysout

Users of CONTROL-M for OS / 390 and z / OS versions earlier than version 6.2.00 have only the On Statement ("On Stmt") option.

On Stmt statement definition

Figure 43 shows a blank set of the fields that are displayed when the **On Stmt** button is selected. These fields are described briefly in Table 34. For more detailed information about these fields, see the *CONTROL-M Job Parameter and Variable Reference Guide*.

Figure 43 On Stmt fields

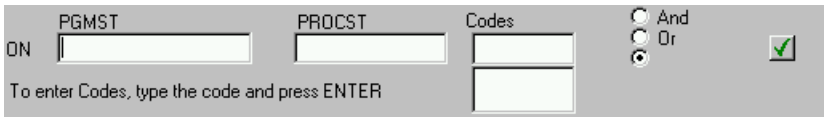


Table 34 On Stmt fields

Field	Description
PGMST	Name of the program step to be checked for the specified code criteria.
PROCST	Name of the procedure step, in which the program step is found.
Codes	Codes for the indicated step which satisfy the criteria. Type in each code separately, and press **Enter** after each code.
And/Or/<blank>	Buttons that set the logical relationship between multiple On statements. If only one On statement is specified, <blank> should be clicked.

On Sysout statement definition

Figure 44 shows a blank set of the fields that are displayed when the On Sysout button is selected. These fields are described briefly in Table 35. For more detailed information about these fields, see the *CONTROL-M Job Parameter and Variable Reference Guide*.

Figure 44 On Sysout statement (CONTROL-M for z/OS version 6.2.00 and later)

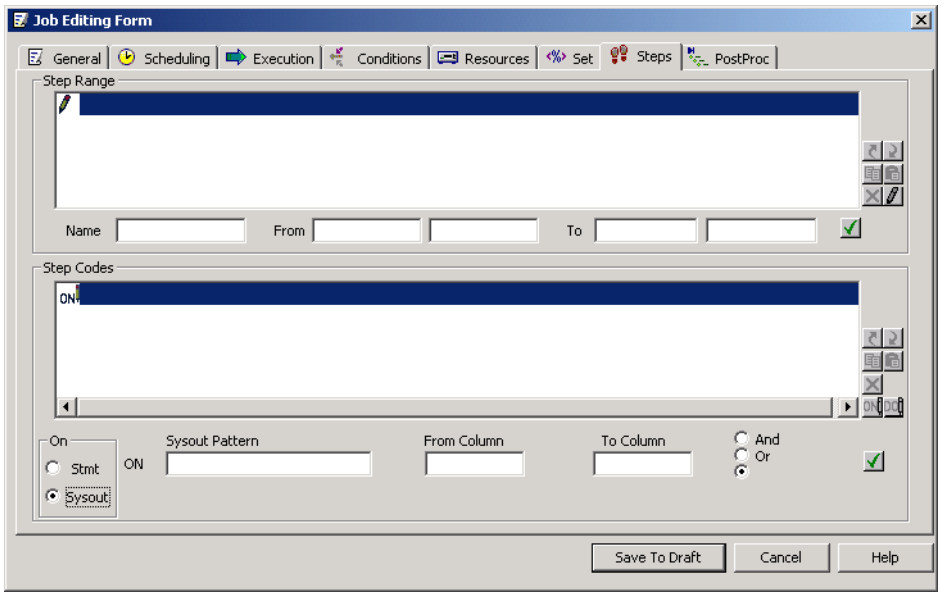


Table 35 On Sysout parameters

Parameter	Description
Sysout Pattern	A string of up to 40 characters.
From Column	A number from 001 through 132, indicating the column at which the search should start. If this field is blank, the value 001 is assumed. The value in this field must be lower than that in the To Column field.
To Column	A number from 001 through 132, indicating the column at which the search should end. If this field is blank, the value 132 is assumed. The value in this field must be higher than that in the From Column field.
And/Or	Option buttons that set the logical relationship between multiple On statements.

DO statements

The DO statement definition line is displayed by clicking the DO button DO. Figure 45 displays a sample Do Statement definition line.

The fields displayed in this line vary depending on the selected DO action. A brief description of each DO action and its fields is supplied in Table 36. For more information about these fields, see the *CONTROL-M Job Parameter and Variable Reference Guide*.

After editing or creating a DO statement, click the check button at the corner of the Step Codes section to save the changes and / or add the statements to the list.

Figure 45 DO statement definition line

Table 36 DO statement parameters

Parameter	Description
DO OK	Sets the job's completion status to OK regardless of the job's completion status. No subparameters.
DO NOTOK	Sets the job's completion status to NOTOK regardless of the job's completion status. No subparameters.
DO Rerun	Causes the job to be rerun according to the parameters specified in the Rerun parameter. No subparameters.
DO Stop Cyclic	Prevents subsequent iterations of the current cyclic job. No subparameters.

Table 36 DO statement parameters

Parameter	Description	
DO Set-Var	Assigns a value to an AutoEdit variable. The following subparameter fields are displayed for this DO statement:	
	Name	Name of variable to be set to the specified value.
	Value	Value for the specified variable. This value can be either a constant value, or a resolvable AutoEdit Expression. This value cannot contain application-specific job parameters. The names of application-specific job parameters are prefixed by two percent signs, the application's abbreviation and a hyphen (%%SAPR3- for SAP, %%OAP- for Oracle, and so on). For more information about AutoEdit Expressions, see the *CONTROL-M Job Parameter and Variable Reference Guide*.
	Note: This parameter is called DO AutoEdit in CONTROL-M/EM.	
DO Shout	Specifies messages to be sent ("shouted") to various destinations on various occasions. The following subparameter fields are displayed for this DO statement:	
	Destination	Destination to which the message should be sent.
	Urgency	Priority for the shout message. Select the option button the reflects the level of urgency for the specified message; **Regular**, **Urgent**, or **Very Urgent**.
	MSG	Text of the message to be sent.
DO Force-job	Forces a job or a complete scheduling table to be ordered under CONTROL-M regardless of the scheduling criteria. The following subparameter fields are displayed for this DO statement:	
	SCD Table	Name of the scheduling table containing the job to be forced.
	Job Name	Name of the job to be forced.
	Date	Scheduling date of the job to be forced. Valid values: **ODAT**, or a specific 4 or 6 character date reference (mmdd, ddmm, yymmdd, or yyddmm format, depending on the site standard). **For MVS:** Only yymmdd or yyddmm format can be used.
	Library	Name of the library containing the specified scheduling table.

Table 36 DO statement parameters

Parameter	Description	
DO Sysout	Specifies how the job's log should be handled. The following subparameter fields are displayed for this DO statement:	
	option	Sysout option code (list box). The following options are available: **C** Change job class. **F** Copy output. **D** Delete output. **N** Move output. **R** Release for Printer.
	PRM	Relevant sysout data. The appropriate value depends on the option code above. For use with codes F, C or N. (Text) ■ For option **F**, specify the file name. ■ For option **C**, specify the New class (one character) or * to indicate the jobs original MSGCLASS. ■ For option **N**, specify the new destination (up to 8 characters).
	FROM	From class. Limits the sysout handling operation to sysouts originating in the specified class.
DO CTBRule	Invokes a CONTROL-M / Analyzer rule to be executed at the processing of a specific program step. Available only if CONTROL-M / Analyzer is installed. The following subparameter fields are displayed for this DO statement:	
	Name	Name of the CONTROL-M / Analyzer rule.
	Arg	Arguments to be passed to the rule. Multiple arguments must be separated by commas.

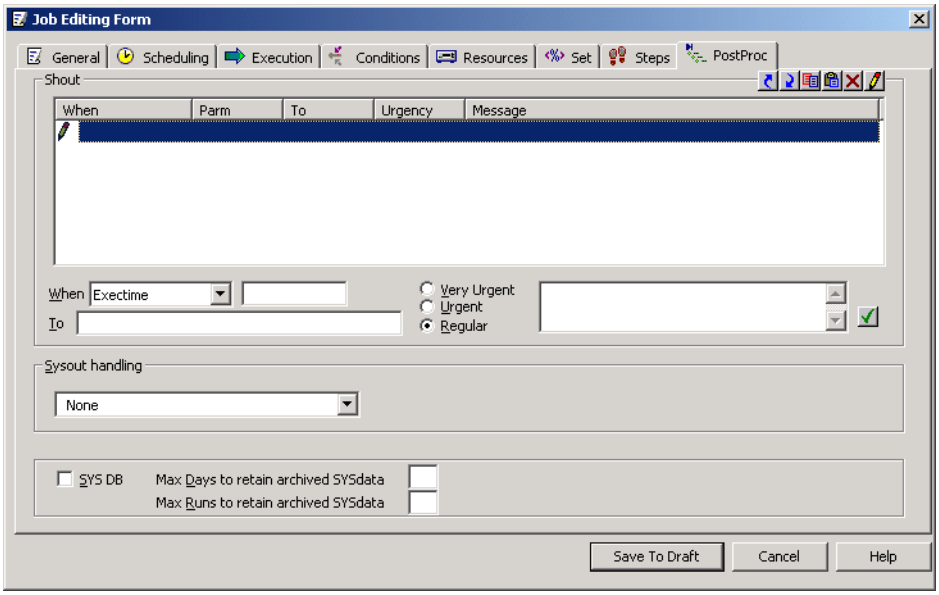
Table 36 DO statement parameters

Parameter	Description	
Do IFRerun	Indicates restart steps for the job if it is rerun. Valid only if CONTROL-M / Restart is installed. The following subparameter fields are displayed for this DO statement:	
	From	Step from which to begin the job restart. The following values can be specified for this subparameter: ■ **pgmstep** — Program step. ■ **procstep** — Called procedure in which the program step is found.
	To	Step at which to end the job restart. The following values can be specified for this subparameter: ■ **pgmstep** — Program step. ■ **procstep** — Called procedure in which the program step is found.
	Confirm	If selected, indicates that manual confirmation is required before the job is submitted for restart.
DO Condition	Specifies prerequisite conditions to be added or deleted. The following subparameter fields are displayed for this DO statement:	
	Name	Name of the prerequisite condition.
	Date	Date reference for the prerequisite condition. Valid values: A specific date (in mmdd or ddmm format), or one of the following 4-character literals: **ODAT**, **PREV**, **NEXT**, **STAT**, or **$$$$**. Note that **$$$$** is only valid when deleting a condition.
	+ or –	These option buttons indicate whether the specified condition should be added (+) or deleted (-).

PostProc panel

The PostProc panel is used to specify actions to be performed upon job completion.

Figure 46 Job Editing form – PostProc panel



This panel is used for specifying the following types of information:

- **Shout information.** Describes messages that should be sent to specified destinations depending on how the job ended.
- **Sysout handling.** Describes how the output of the job should be handled.

Each of these sections is described in detail on the following pages.

Shout

This section of the PostProc panel describes messages to be sent (*shouted*) to various destinations. This section includes a list of previously defined Shout statements for the job. Below this list is a series of fields for specifying additional Shout statements.

- Table 37 describes the buttons that are available for use with Shout statements.
- Table 38 describes the fields that are used for definition of Shout statements.

After editing or creating a Shout message, click the check button ✓ to save the changes and / or add the message to the list.

NOTE

Even after Shout data has been added or changed, the change can be undone or redone (if it was previously undone) using **Ctrl-z** and **Ctrl-y**. For more information, see "Undo and Redo in the Job Editing form" on page 100.

Table 37 Shout statement buttons

Button	Description
	Enter a new message.
	Delete the selected message.
 and 	Change the order of the list.
	Copy data.
	Paste data.

Table 38 Shout statement parameters (Part 1 of 2)

Parameter	Description	
When	Indicates the conditions under which the messages should be issued. Valid values for these fields are:	
	OK	Job ended OK.
	NOTOK	Job ended NOTOK.
	RERUN	Job requires rerun.
	Late Sub	Job not submitted by the specified time. The time must be specified in HHMM format, where HH is 00-23 and MM is 00-59. The message is sent only if the job actually cannot be submitted. That is, a required runtime criterion (such as an in condition or quantitative resource) has not been met.
		Note: If a job is ordered after the specified time but starts running immediately because it meets all runtime criteria, the LATESUB parameter does not apply.
	Late Time	Job not finished running by the specified time. The time must be specified in HHMM format, where HH is 00-23 and MM is 00-59.

Table 38 Shout statement parameters (Part 2 of 2)

Parameter	Description	
	EXECTIME	The message is sent if the elapsed runtime of the job is outside a specified limit. The limit, which is set in the Parm field of the Job Editing Form PostProc panel, can be expressed as a runtime limit, or as a deviation from the average runtime of the job. Valid formats for the limit are:
		+n% – The message is sent if the elapsed runtime of the job exceeds its average execution time by at least n%. n is a number from 1 through 900.
		–n% – The message is sent if the elapsed runtime of the job is at least n% less than its average execution time. n is a number from 1 through 99.
		>n – The message is sent if the elapsed runtime of the job is greater than n minutes. n is a number from 0 through 999.
		<n – The message is sent if the elapsed runtime of the job is less than n minutes. n is a number from 1 through 999.
		+n – The message is sent if the elapsed runtime of the job exceeds its average execution time by at least n minutes. n is a number from 1 through 999.
		-n – The message is sent if the elapsed runtime of the job is at least n minutes less than its average execution time. n is a number from 1 through 999.
To	Destination to which the message should be sent.	
Very Urgent **Urgent** **Regular**	These option buttons indicate the urgency level of the shout.	
message area	This text box to the right of the other fields is used to specify the contents of the message. Use Ctrl+Enter to move to a new line.	

Sysout handling

This section of the PostProc panel specifies handling for the sysout when the job ends OK. describes the fields that are used to specify sysout handling.

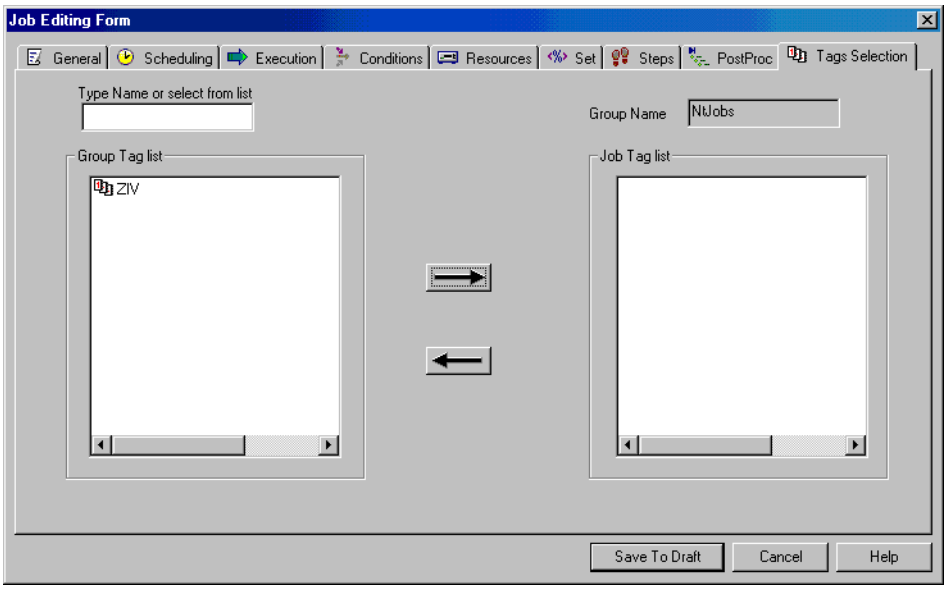
Table 39 Sysout handling parameters

Field	Description	
Sysout Handling Option	Sysout option code. This is specified in the list box directly below the title *Sysout Handling*. **Note:** This field is described as parameter **Option** in the *CONTROL-M Job Parameter and Variable Reference Guide*. Available options are:	
	None	The output of the job is placed in a default location (specified using a CONTROL-M system parameter) until deleted by the next run of the New Day procedure.
	C	Change job class. (for MVS jobs only) The **New Class Name** text box is displayed for the new class designation.
	Copy (in MVS: **F**)	Copy output. The **File Name** text box is displayed for the location to which the log file should be copied.
	Delete (in MVS: **D**)	Delete output.
	Move (in MVS: **N**)	Move output. The **New Destination** text box is displayed for the location to which the log file should be moved.
	Release (in MVS: **R**)	Release output to Printer.
From Class	Limits the sysout handling operation to sysouts originating in the specified class.	
AutoArchive	**For MVS jobs only:** When selected, this option indicates that the sysout of the job should be archived.	
SYS DB	When selected, indicates that the SYSDATA of the job should be archived to a common data set.	
Max Days ...	Maximum number of days to retain archived SYSDATA. Must be a two-digit number in the range 00 – 99.	
Max Run ...	Maximum number of runs for which archived SYSDATA should be retained. Must be a three-digit number in the range 000 – 999.	

Tags Selection panel

The Tags Selection panel indicates which Schedule tags in a group scheduling table should be used by the current job. This panel is not relevant for jobs that are not in a group scheduling table.

Figure 47 Tags Selection panel of the Job Editing form



The Tag Selection panel includes two lists:

- The Group Tag list (on the left) is a list of Schedule tags that are in the group scheduling table definition and not used by the job processing definition.
- The Job Tag list (on the right) is a list of Schedule tags that are used by the job processing definition.

NOTE

The name of the current group scheduling table is displayed in the upper-righthand corner of the Tag Selection panel.

To add a tag to the job definition:

1. Either click a tag in the Group Tag list, or enter its name in the text box.
2. Click the right-facing arrow. The tag is removed from the list of Group Tags, and added to the list of Job Tags.

To remove a tag from the job definition:

1. Click on the tag in the Job Tag list.

2. Click the left-facing arrow. The tag is removed from the list of Job Tags and added to the list of Group Tags.

You can use an asterisk "*" as a wildcard in the tag name, either on its own or as a suffix. For example, if you type **A***, all the tags in the Group Tag list that begin with an **A** are selected. If you type ***** or **ALL**, all tags in the Group Tag list are selected.

Exiting the Job Editing form

The method for exiting the Job Editing form depends on how the form was originally opened.

If the Job Editing form was opened in Flow Diagram view, in List view, from the New Job button, or from the Job New menu option, the Job Editing form appeared as a dialog box. This dialog box may need to be closed before you perform certain processes.

- Click **Save to Draft** (or **Save to Database** if working in online load mode) to apply the changes you have made in the Job Editing form.

- Click **Cancel**, to cancel the changes you have made in the Job Editing form.

If the Job Editing form was opened in List / Job Editing View by selecting the job from the tree in the left pane, the Job Editing form appeared in the right pane. Additional processing can be performed in the draft when using this format.

- Click **Save to Draft** (or **Save to Database** if working in online load mode) to apply the changes you have made in the Job Editing form.

- Click **Cancel**, to cancel the changes you have made in the Job Editing form.

Running CONTROL-M/Server utilities as scheduled jobs

CONTROL-M/Server utilities can be invoked using the Command parameter of any job definition where Command has be specified for the Task Type parameter.

A special draft of predefined jobs is supplied with CONTROL-M/EM with sample job definitions for certain CONTROL-M/Server utilities (Table 40).

To use a predefined utility job

1 In CONTROL-M/Desktop, click  to open the draft browse window.

2 Navigate to **<INSTALLATION_DIR>\ControlM-EM\CTMDsktp** and double-click the **Control-M Server Utilities.DRF** file. the jobs in the draft are displayed in the flow diagram.

3 Double-click on the job that you want to schedule. The Job Editing form is displayed.

4 On the General panel of the Job Editing form, specify values for the following parameters:

- Author (if enabled)
- CONTROL-M
- Node ID/Group
- Owner

5 Update the command line with the values you specified in step 4 (for ctmcreate and ctmdefine only).

6 Optional. Modify the command line to change the utility's behavior.

7 Optional. Modify any other job parameters.

8 Click **Save to Draft** or **Save to Database**.

9 If working in local load mode, write the job to the CONTROL-M/EM database.

Table 40 CONTROL-M/Server utility jobs

Job name	Utility
ctmcontb	Performs operations on the Prerequisite Conditions table.
ctmcreate	Creates a job in the Active Jobs file.
ctmdefine	Defines a job in the CONTROL-M / Server database.
ctmkilljob	Terminates a CONTROL-M job and its associated processes.
ctmloadset	Updates a resource in the Quantitative Resources table with regard to usage on an Agent platform.
ctmorder	Orders one or more jobs from a scheduling table contained in the CONTROL-M / Server database.
ctmudly	Orders jobs for a specific User Daily name.
ctmvar_set	Sets a variable. Manipulates Global AutoEdit variables for data centers, group scheduling tables, or jobs in group scheduling tables.
ctmvar_delete	Deletes a variable specification.
ecactltb	Lists the status of each resource in the Control Resources table.
ecaqrtab	Performs operations on the Quantitative Resources table.
ecaqrtab_add	Adds a resource
ecaqrtab_list	Deletes a resource.

For more information about CONTROL-M / Server utilities, see the Utilities chapter of the *CONTROL-M/Server for Unix Administrator Guide*.

Chapter 4

Creating and updating multiple jobs

You can define or modify many job processing definitions simultaneously by modifying job skeletons (templates) and applying the new or modified skeletons to the relevant jobs. The following topics are discussed in this chapter:

- Mass Creation of job processing definitions
- Skeletons. These are templates containing default values used to define multiple jobs with identical characteristics.
- Mass Updating jobs based on a Skeleton.

NOTE

The Mass Creation and Mass Update operations when working in online load mode. For more information, see "A comparison of online and local load modes" on page 21.

These features eliminate the need to create and modify each job processing definition individually. Instead, many job processing definitions can be defined or modified simultaneously.

Mass creation of job processing definitions

Mass creation is the process of defining multiple job processing definitions using a common job skeleton (template). The job skeleton is created with parameters that should appear in all jobs to be created. After the jobs are created, they can be modified individually using the Job Editing form (described in Chapter 3 of this guide).

NOTE

When working in online mode, this feature is not available.

NOTE

Normally individual job processing definitions are created using the **Edit => Job** => **New Job** option, or by clicking the **New Job** button on the toolbar.

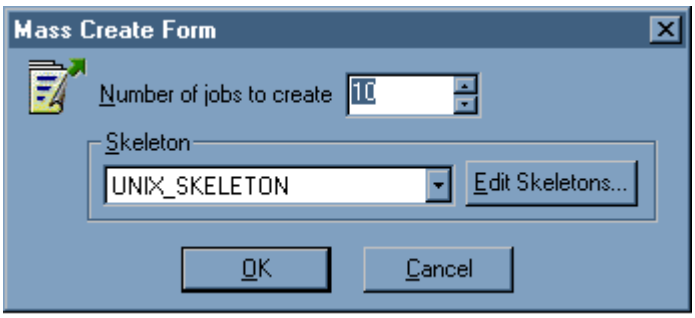
To create multiple jobs with similar parameters:

1 Select the **Tools** => **Mass Create** option from the menu bar.

--or-

Click the **Mass Job Creation** button on the toolbar.

The **Mass Create Form** dialog box is displayed.



2 Specify the number of jobs to create and the name of the Skeleton that contains the parameters to be defined for all the new job processing definitions. (Table 41 contains descriptions of all fields in this dialog box.)

Table 41 Fields of the Mass Create Form dialog box

Field	Description
Number of jobs to create	Number of jobs to create using the specified skeleton. Default: **10**.
Skeleton	Skeleton to be applied to the new jobs. To select a different Skeleton, click on the arrow in the Skeleton field and select the Skeleton from the list. Skeletons can be modified or created using the Skeleton Editor form. This form is displayed by clicking the Edit Skeletons button (described below). For more information, see "Job skeletons" on page 148.
Edit Skeletons	Opens a skeleton editor for the specified skeleton. For more information, see "Job skeletons" on page 148.

3 Click **OK** to create the requested number of jobs using the specified Skeleton.

Helpful hints

The Mass Create facility enables you to modify a job skeleton at various stages so that fewer changes are required later.

Example: Create multiple jobs for various applications

Create 40 job processing definitions for several different applications or groups which all include a certain set of parameters and values.

The recommended method for creating these jobs using one skeleton is as follows:

1 Specify the wanted Skeleton name in the **Mass Create Form** dialog box.

2 Specify the parameters and values in the Skeleton Editor work area.

3 Specify the first Application name and Group name (e.g., App1, and Group1).

4 Click **OK** to save the changes.

5 Specify the number of jobs wanted for the first group (e.g., 10).

6 Click **OK** to create the jobs.

7 Repeat Steps 3 through 6 for each application or group.

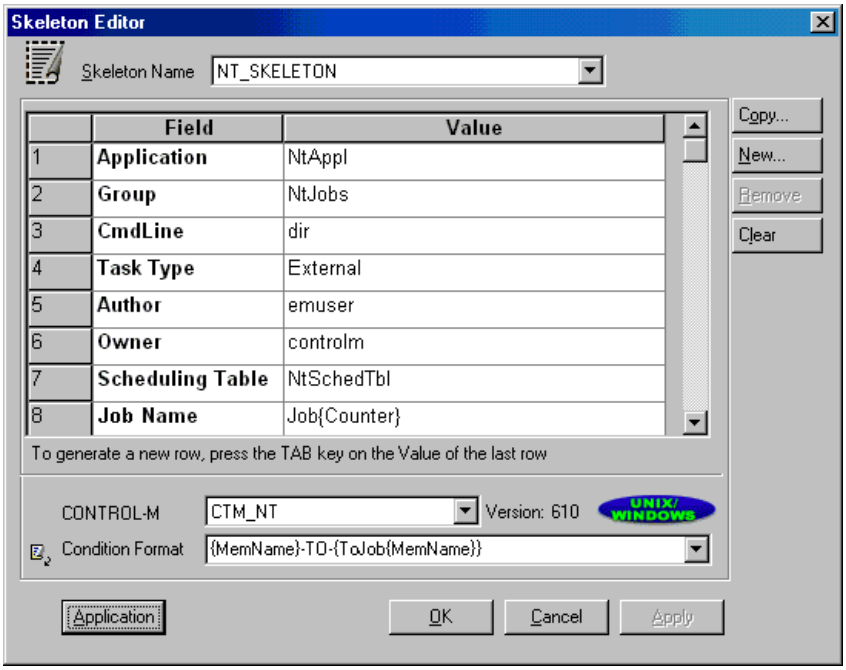
Job skeletons

Job skeletons are templates that are used for the creation of multiple job processing definitions. Each job skeleton contains a set of parameters and values. When a job skeleton is used to create new jobs, the new jobs automatically include the parameters and values that are specified in the skeleton. By modifying a skeleton and reapplying it to related jobs, the jobs can also be modified simultaneously.

All job skeletons are created and modified using the Skeleton Editor form.

To open the Skeleton Editor form click the **Edit Skeletons** button in the **Mass Create Form** dialog box. The Skeleton Editor form can also be opened by selecting the **Job Skeleton** option on the menu bar or by clicking the **Edit Skeleton** button on the toolbar.

Figure 48 Skeleton Editor window



Skeleton Editor form controls are described in Table 42.

Table 42 Skeleton Editor form controls

Element	Description
Skeleton Name	Name of the Skeleton to be used. Select a name from the list or type in a new name. The Skeleton name is case sensitive.
CONTROL-M	Type of CONTROL-M platform that processes the job processing definitions produced by this Skeleton. Select a value from the list box. The selected value determines which Job Editing form is displayed based on CONTROL-M platform type.

Table 42 Skeleton Editor form controls

Element	Description
Application	Expands the Skeleton Editor window to include fields for defining skeletons for specific applications (such as SAP or Oracle Applications). Type of application for jobs created using this skeleton. The General Panel in the Job Editing Form is modified to display the parameters for the specific application. The valid applications types are: ■ **Oracle** - Creates a skeleton for Oracle Applications jobs. ■ **SAP** - Creates a skeleton for SAP jobs. ■ **Windows 2000** - Creates skeletons for jobs running on Microsoft Windows 2000. The expanded Skeleton Editor window is displayed in Figure 49.
Condition Format	Format for In Conditions and Out Conditions that are automatically created by job dependencies defined in the Flow Diagram view. For more information, see "Condition Format" on page 155.

The work area of the Skeleton Editor form contains a table for specifying job processing definition fields and their values (described below).

To create a new skeleton

1 Click **New**.

2 Specify a name for the new Skeleton and click **OK**. An empty Skeleton Editor form is displayed.

3 Specify the wanted Skeleton fields and values in the work area. See "Specifying and modifying skeleton fields" on page 153 for details about this part of the Skeleton Editor.

4 Click **OK** to save the Skeleton and to close the Skeleton Editor form.

To create a new skeleton based on the values of an existing skeleton

1 Select the existing Skeleton in the Skeleton name list box on the CONTROL-M / Desktop tool bar.

2 Click **Copy**.

3 Specify a name for the new Skeleton and click **OK**. The new Skeleton is displayed with the same fields and values as the Skeleton from which it was copied.

4 Make the necessary changes in the Skeleton Editor work area. See "Specifying and modifying skeleton fields" on page 153 for details about this part of the Skeleton Editor.

5 Click **OK** to save the new skeleton and to close the Skeleton Editor form.

To modify a skeleton

1 Select a Skeleton in the **Mass Create Form** dialog box.

2 Click the **Edit Skeletons** button. The Skeleton Editor form is displayed.

3 Make the necessary changes in the Skeleton Editor work area. See "Specifying and modifying skeleton fields" on page 153 for details about this part of the Skeleton Editor.

4 Click **OK** to save the changes and to close the Skeleton Editor.

To delete a skeleton

1 Select the Skeleton in the Skeleton name list box at the top of the Skeleton Editor form.

2 Click the **Remove** button.

To add a row to the Skeleton window

Place the cursor in the last cell of the table and press **<Tab>**.

To delete a row From the Skeleton window

Place the cursor in any row of the table and press **<Delete>**.

To clear all fields in the currently displayed skeleton

Click the **Clear** button.

Defining skeletons for jobs running on specific applications

When **Application** is clicked, the Skeleton Editor window expands to display additional controls. These controls are used to define skeletons for jobs that are run on specific external applications, such as SAP or Oracle Applications.

NOTE

Do not specify values for the parameters discussed in this section if you do not have one of the supported applications (such as SAP) installed in your system, together with the appropriate Control Module for CONTROL-M.

These additional controls specify parameters that determine which application parameters are included in the skeleton. Whereas regular CONTROL-M/EM job parameters are always included in the skeleton (even when you do not specify a value for them), the application (such as SAP) parameters that are included in the skeleton are fluid.

Which parameters are displayed is dependent on which form (specified with the **Form Name** parameter) is chosen. Which form can be selected is dependent on the values specified for the **Application Type**, **Application Version**, and **Control Module Version** parameters. These parameters are described in the *CONTROL-M Job Parameter and Variable Reference Guide*.

Figure 49 Expanded Skeleton Editor window

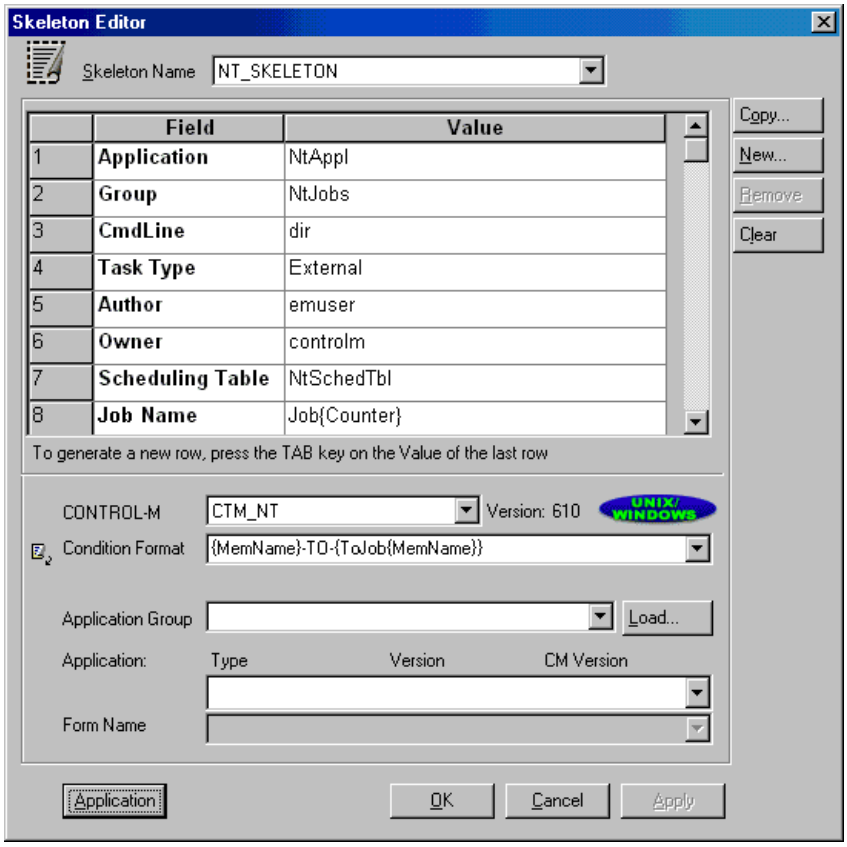


Table 43 Application support fields in the skeleton editor

Field	Description
Application Node Group	Logical name of the node group that processes the job. Selecting the Application Node Group determines the values for the **Application Type**, **Application Version**, and **Control Module Version** parameters. Click **Load** to import one of the available Application Groups from your CONTROL-M installation.
Application Type	Indicates the type of external application (for example, SAP or Oracle Applications) on which the external application job runs. Determined automatically by the Application Group that is loaded and displayed as Read Only.
Application Version	Indicates the version of the external application (for example, SAP or Oracle Applications) on which the external application job runs. Determined automatically by the Application Group that is loaded and displayed as Read Only.
CM Version	Indicates the version of external application (for example, SAP or Oracle Applications) Control Module (CM) that is installed in the CONTROL-M installation. A Control Module is a BMC Software product that enables your application to interoperate with your CONTROL-M installation. Determined automatically by the Application Group that is loaded and displayed as Read Only.
Form Name	Specifies a predefined set of external application parameters that are displayed in the External Application panel of the CONTROL-M/EM Job Editing form. The forms that are available for selection is dependent on the values specified for **Application Type**, **Application Version**, and **Control Module Version**. **Note**: You must load any available forms onto your local computer using **View => Import Forms**. Forms must be loaded onto your computer to be available.

Specifying and modifying skeleton fields

The work area of the Skeleton Editor dialog box contains a table of parameters and values to be applied to related job processing definitions.

To modify parameters in the Skeleton Editor work area:

1 Click the **Field** column in the line to be edited. A list box is displayed containing valid field (parameter) names.

2 Select the wanted field. The field name appears on the line.

NOTE

Most fields can be specified only once in each job processing definition. If a field of this type has already been specified for the current skeleton, it no longer appears in the list box. In Conditions and Out Conditions can be specified multiple times and are therefore always available from the field list box.

3 Specify the value for the field in the **Value** column by either typing the value or selecting the value from a predefined list box.

NOTE

Valid values for the job processing parameters displayed in the Skeleton Editor are described in the *CONTROL-M Job Parameter and Variable Reference Guide*.

Special functions can also be specified in the **Value** field. See Table 44 on page 155 for a description of these functions.

4 Select the type of CONTROL-M platform on which the job processing definitions using this Skeleton are processed.

5 Specify a format (**Condition Format**) for In Conditions and Out Conditions to be automatically created when job dependencies are created by clicking and dragging from one job node to another in the Flowdiagram view.

6 Select and edit another Skeleton, if necessary.

NOTE

Changes made to skeletons in the Skeleton Editor can be saved either by clicking the **Apply** button or the **OK** button. You can make changes to one skeleton and then make changes to a second skeleton without saving changes to the first skeleton. Pressing **Apply** or **OK** saves all changes. Clicking **Cancel** cancels all changes. Conversely, it is possible to make changes to one skeleton and click **Apply** to save them. Further changes to the same skeleton or a different one can then be cancelled or saved without cancelling the changes made prior to **Apply** being clicked.

7 Click **OK** to save all the changes and close the Skeleton Editor form.

To move fields in the Skeleton Editor work area:

1 Place the cursor on the number (left column) of the line to be moved. An arrow is displayed.

2 Drag the selection to the wanted location.

To remove lines from the Skeleton Editor work area:

1 Place the cursor on the number (left column) of the line to be deleted. An arrow is displayed.

2 Click the number for the line. The line is highlighted.

3 Press the **<Delete>** key.

To delete multiple lines from the Skeleton Editor work area:

1 Click the number of the first line to be deleted, and drag the cursor to highlight all lines to be deleted.

2 Press the **<Delete>** key.

Table 44 Valid functions for values in the skeleton editor

Function	Description		
{fieldname}	Name of a field in the job processing definition. Use the name of the field exactly as it appears in the from the list box of the Field column.		
{Counter}	Incremental number to be inserted in the value (e.g., **This job is Job # {Counter}**).		
{+ | -{numerical field | function},quantity to add or subtract}			
	Indicates an amount to be incremented or decremented from a number in the condition name format. This function can be used to reference a previous or subsequent job (e.g., Job#{-{Counter},1}-ENDED).		
{Substr position.length,{fieldname | function}}			
	Substring from a specified field or function.		
	position	Offset of the substring within the field / function (zero-based)	
	length	Number of characters	
	fieldname	Name of the field	
	function	Name of the function	
	For example, To indicate the first two characters of MemName, specify: **{Substr 1.2,{MemName}}**.		

In conditions and Out conditions

Two types of information can be specified about prerequisite conditions in a job skeleton.

- Format for the conditions automatically defined when dependencies are created in the Flow Diagram view (by clicking on one job and dragging the cursor to the dependant job).
- Actual In conditions and Out conditions defined in the job skeleton that should be part of each job processing definition that is created using the skeleton.

Each of these types of condition information is described in the following pages.

Condition Format

In the Flow Diagram view of CONTROL-M / Desktop, you can create dependencies between jobs by clicking on a job node and dragging the mouse cursor to a dependant job. When you do this, an Out condition is automatically defined in the job processing definition of the first job, and a corresponding In condition is added to the job processing definition of the second job. The **Condition Format** field in the Skeleton Editor dialog box indicates the format these automatically defined conditions.

NOTE

The format specified for these conditions has no effect on other In conditions and Out conditions specified in either the job skeleton or in specific job processing definitions.

The value for the **Condition Format** can be either chosen from the list box containing predefined format, or you can specify your own format using the special functions described in Table 45.The default condition format is:
{MemName}-TO-{ToJob{MemName}}.

Table 45 Valid functions for the Condition Format field

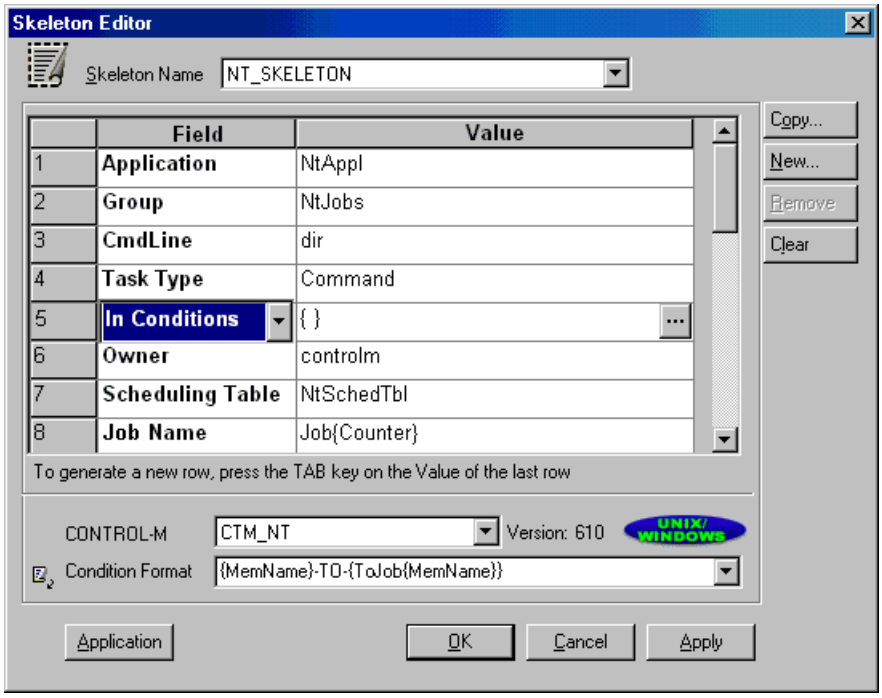
Function	Description		
{from fieldname}	Name of a field in the first job (meaning, the job to which we are adding an Out condition).. Use the name of the field exactly as it appears in the list box of the Field column.		
{Counter}	Incremental number to be inserted in the value (e.g., Job#{Counter}-ENDED). This value is incremented for each successive dependent job in line of dependent jobs. The first job from which others are dependent is number one. The second job is number 2, and so on.		
{+ | -{numerical field | function},quantity to add or subtract}			
	Indicates an amount to be incremented or decremented from a number in the condition name format. This function can be used to reference a previous or subsequent job (e.g., Job#{-{Counter},1}-ENDED). This value assumes that the first in a line of independent jobs was job number 1.		
{Substr position.length,{from fieldname | function}}			
	Substring from a specified field or function.		
	position	Offset of the substring within the field / function (zero-based)	
	length	Number of characters	
	fieldname	Name of the field	
	function	Name of the function	
	For example, To indicate the first two characters of MemName, specify: **{Substr 1.2,{MemName}}**.		
{ToJob[to fieldname]}			
	Name of a field in the dependent job (i.e., job to which we are adding an In condition). For example, to indicate the MemName of the from and to jobs, use **{MemName}-{ToJob[MemName]}**.		

Specifying In conditions and Out conditions in a skeleton

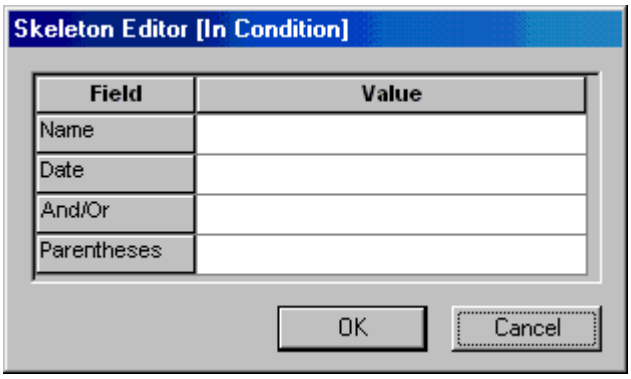
In conditions and Out conditions specified in a job skeleton are added to each job processing definition created using that skeleton. Each In condition or Out condition contains multiple fields. Therefore, addition, modification and deletion of these conditions differs from the methods used for specifying values for other job processing definition fields.

To add an In condition or Out condition to a job skeleton:

1 Place the cursor in the Field column of the Skeleton Editor work area and select **In Conditions or Out Conditions** from the list box. A pair of braces **{}** is displayed in the value column.



2 Click the ellipsis button ... in the value column. The following dialog box is displayed.



3 Enter the name of the In condition or Out condition in the **Name** field. Values for **Date** and **And/Or** can be selected from lists or they can be entered manually.

The **Parentheses** field is used to group conditions for implementation of And / Or logic with groups of conditions. For more information about And / Or logic and prerequisite conditions see the *CONTROL-M Job Parameter and Variable Reference Guide*.

4 Click **OK** when finished.

Multiple In conditions and Out conditions can be defined in a job skeleton.

Updating multiple jobs and group scheduling tables

The CONTROL-M / Desktop Mass Update facility updates fields and values in multiple job processing and group scheduling table definitions. This facility can be applied to all job and group scheduling table definitions in the draft or in the current collection. By first defining a collection, mass updates can be performed only on the definitions in the collection.

NOTE

A draft is comprised of all jobs and group scheduling tables currently in CONTROL-M / Desktop, whether they are displayed or not. If you apply a filter to display only selected jobs from the draft, these displayed jobs comprise the current collection. Collections of jobs are for viewing purposes only and cannot be saved.

NOTE

When working in online mode, this feature is not available.

To perform mass update of job processing definitions:

1 Select the **Tools** => **Mass Update**.

-or-

Click the **Mass Update** button on the tool bar. The Mass Update window is displayed.

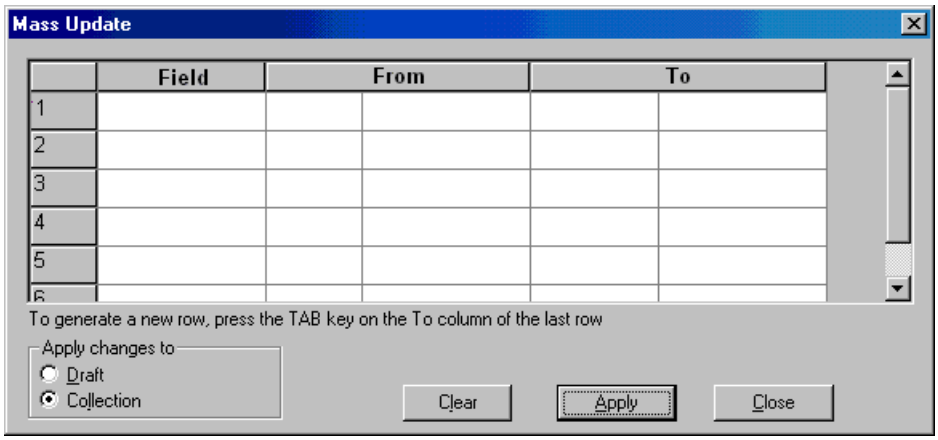


Table 46 describes the fields in the Mass Update window.

2 Fill in the table in the work area of the Mass Update window. Each line in the table can specify criteria that determine which job processing definitions are updated, or to specify a field to be added or updated.

3 Click the **Draft** option button to apply the changes to all jobs and group scheduling tables in the draft, or the **Collection** option button to apply the changes only to jobs in the current collection.

4 Click **Apply** to perform the update.

-or-

Click **Close** to close the Mass Update window without performing the requested function.

Table 46 Fields of the Mass Update window

Field	Description		
Field	Field in the job or group scheduling table definition to be searched. Click the arrow to display a list of possible fields.		
From	Search value for the field. Each From field consists of an operator specification and a value specification.		
	Operator	Operator to apply to the specified value. Click the arrow to display a list of valid operators (described below).	
		=	The value in the specified field must equal the value specification in the table.
		Like	Values in the table can contain an * (asterisk). The asterisk matches single character or multiple characters which occupy the same character position in the value specification in the table.
		>	The value in the specified field must be greater than the value specification in the table.
		<	The value in the specified field must be less than the value specification in the table.
		!=	The value in the specified field must not equal the value specification in the table.
		In	The value in the specified field must match at least one of the value specifications in the table. Use commas to separate the values.
		Not In	The value in the specified field must not match any value specifications in the table. Use commas to separate the values.
	Value	Values for which to search in the job or group scheduling table parameter.	
To	Instructions for handling jobs that meet the criteria specified in the From field. Each To field consists of a function specification and a value specification.		
	Function	The function that should be performed on the jobs that meet the criteria specified in the From field.	
		Find	The From criteria are used to select jobs to be modified according to other lines in the Mass Update Form. **Note**: The value specification of the To field is unavailable when the Find function is selected.
		Update	The From criteria are used to update jobs to the value specification of the To field.
	Value	The new value to replace the existing value in the field. Type in a value, or select the new value from a predefined list box. Null values may also be specified by leaving the field empty. **Note**: This field is unavailable when the Find function of the To field is selected. Special functions can be used to specify complex values to replace existing information. These functions are described in Table 47 on page 161.	

Table 47 Valid functions for To values

Function	Description	
{fieldname}	Name of a field in the job or group scheduling table definition. Use the field name exactly as it appears in the list box of the Field column (e.g., The MemName of this job is {MemName}).	
{Counter}	Incremental number to be inserted in the value (for example, This job is Job # {Counter}).	
{+ | -{numerical field | function},quantity to add or subtract}		
	Indicates an amount to be incremented or decremented from a number in the condition name format. This function can be used to reference a previous or subsequent job (for example, Job#{-{Counter},1}-ENDED).	
{Substr position.length,{from fieldname | function}}		
	Substring from a specified field or function.	
	position	Offset of the substring within the field / function (zero-based)
	length	Number of characters
	fieldname	Name of the field
	function	Name of the function
	For example, To indicate the first two characters of MemName, specify: **{Substr 1.2,{MemName}}**.	
{ToJob[to fieldname]}		
	Name of a field in the dependent job (that is, job to which we are adding an In condition). For example, to indicate the MemName of the from and to jobs, use **{MemName}-{ToJob[MemName]}**.	

Mass updating of In conditions and Out conditions

Each In condition or Out condition contains multiple fields. Therefore, addition, modification and deletion of these conditions in the Mass Update Form dialog box differs from the methods used for specifying values for other job processing definition fields.

Using the Mass Update facility, you can:

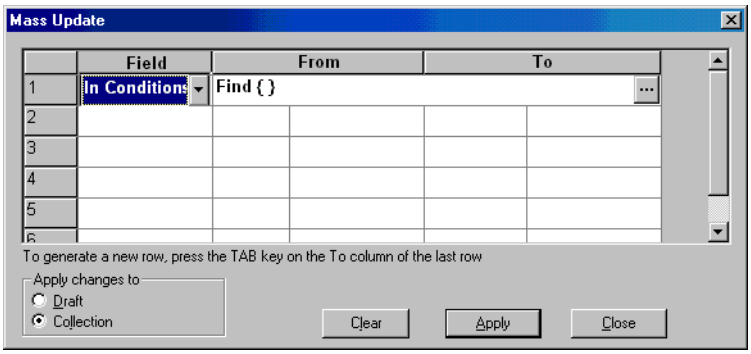
- Search for job processing definitions with various types of In conditions or Out conditions.
- Update, add or remove any of the fields in each In condition.
- Add new conditions to all job processing definitions that were selected according to the find criteria in the Mass Update Form.

NOTE

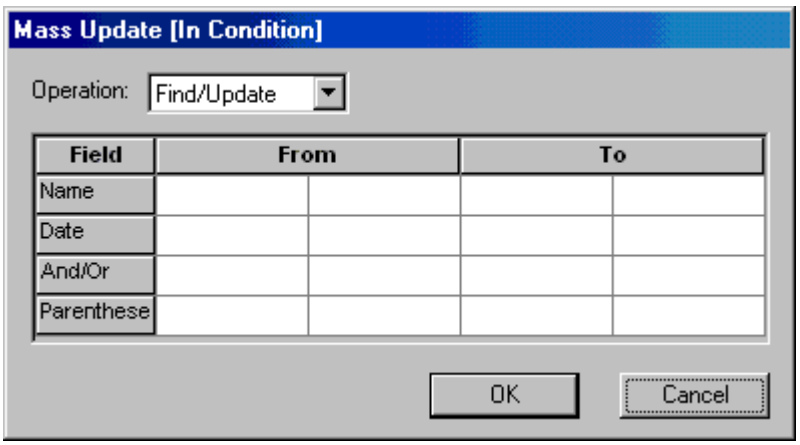
The following steps describe how to find or update In condition data. Find and Update for Out conditions is handled in almost the same way as for In conditions. The only difference is that the **Mass Update [Out Condition]** dialog box contains rows for **Name**, **Date**, and **Plus/Minus**.

To find or update In condition and Out condition data:

1 Select **In Conditions** from the list in the **Field** column of the **Mass Update Form**. The **From** and **To** fields of the form merge and an ellipsis button ··· is displayed on the right. A pair of braces **{}** are displayed in the merged **From/To** field.



2 Click ···. The **Mass Update [In Condition]** dialog box is displayed.



3 Select **Find/Update** from the **Operation** list.

4 Each condition is described by four fields: **Name**, **Date**, **And/Or**, and **Parentheses**. You can specify search criteria for any number of these fields.

For each field to be used as search criteria:

A Click the first cell in the row, and select an operator from the list.

B In the second cell of the row, either enter a text string to be found or updated, or select the search criteria from the list. The text string can contain all valid characters specified in the tables Table 46 on page 160 and Table 47 on page 161.

C The word **Find** is displayed in the third cell.

- If condition data is to be used only as search criteria, continue with Step 5.
- If certain fields should be updated, continue with substep D (below).

D Enter the update text string in the fourth cell of the Name row. When data is entered in the fourth cell, the term **Find** in the third cell automatically changes to **Update**. The text string can contain all valid characters specified in Table 46 on page 160 and Table 47 on page 161.

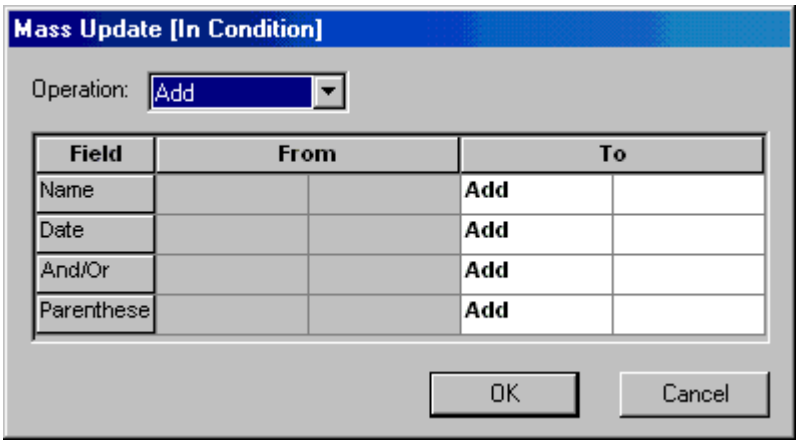
E For the remaining rows (**Date**, **And/Or** and **Parentheses**), select update data from the lists that are displayed when the cursor is placed in the last cell of each row.

F Click **OK** to save your specifications and to return to the Mass Update Form. A summary of the Find / Update data is displayed in braces in the In Conditions row.

To add In conditions:

1 Select **In Conditions** from the list in the **Field** column in the **Mass Update Form**. The **From** and **To** fields of the In Condition line merges, and an ellipsis button is displayed on the right. A pair of braces **{}** are displayed in the merged **To/From** field.

2 Click  . The **Mass Update [In Condition]** dialog box is displayed.



3 Select **Add** from the **Operation** list box. The **From** section of the table is unavailable and the word **Add** is displayed in the first cell of the **To** section in each row.

4 In the fourth (last) cell in the row marked **Name**, enter the name of the new condition. The text string can contain all valid characters specified in Table 46 on page 160 and Table 47 on page 161.

5 In the remaining rows, **Date**, **And/Or** and **Parentheses**, select data to be added from the lists that are displayed when the cursor is placed in the last cell of each row.

6 Click **OK** to enter the data and return to the Mass Update Form. A summary of the added data is displayed in the braces in the In conditions row.

NOTE

To add new In conditions, values must be specified for all of the rows in the **Mass Update [In Condition]** dialog box.

To remove data from In conditions:

Follow the steps listed above in "To Find In Condition Data." However, in step 3, select **Remove** from the **Operation** list. The To section of the table is unavailable and the word **Remove** is displayed in the first cell of the **From** section in each row.

NOTE

It is not necessary to fill in values for all rows of the table for the Remove procedure to work. For example, entering only the operand = and a specific date would remove all In condition data that contain that date.

To add and remove Out conditions:

Use the same procedure as described above for In conditions. Note only that the **Mass Update [Out Condition]** dialog box contains slightly different rows (**Name**, **Date**, and **Plus/Minus**).

Working with the Group Editing form

The Group Editing form is used to view, specify and modify processing definitions that apply to jobs in a group scheduling table.

NOTE

CONTROL-M/EM does not support definition of group scheduling tables for CONTROL-M for OS/390 versions earlier than 6.0.00.

These parameters are used by CONTROL-M to determine:

- When jobs in the group should be ordered.
- Which conditions must be satisfied before jobs in the group are submitted for execution.
- What action follows successful completion of all jobs in the group or unsuccessful completion of a job in the group.

NOTE

You can convert an existing scheduling table to a group scheduling table using the **copydefjob** utility. This change enables you to take advantage of group processing of jobs. For more information, see the **copydefjob** utility description in the *CONTROL-M/Enterprise Manager Utility Guide*.

To open the Group Editing form for an existing group scheduling table:

1. Choose **View => Flowdiagram**.
2. Right-click the group scheduling table node, and choose **Edit** from the pop-up menu.

To open a Group Editing form for a new group scheduling table:

Choose **Edit => Scheduling Group=>New**, or click .

NOTE

You can only open the Group Editing form in Flow Diagram view.

You cannot create a new group when working in online load mode.

Layout

The Group Editing form, which is shown in Figure 50, is divided into different panels in a similar way to the Job Editing form. Each panel contains a group of parameters. Some parameters differ for the different CONTROL-M platforms.

Table 48 describes the panels of the Group Editing form. Each panel is described in detail in the following pages.

Figure 50 Group Editing form

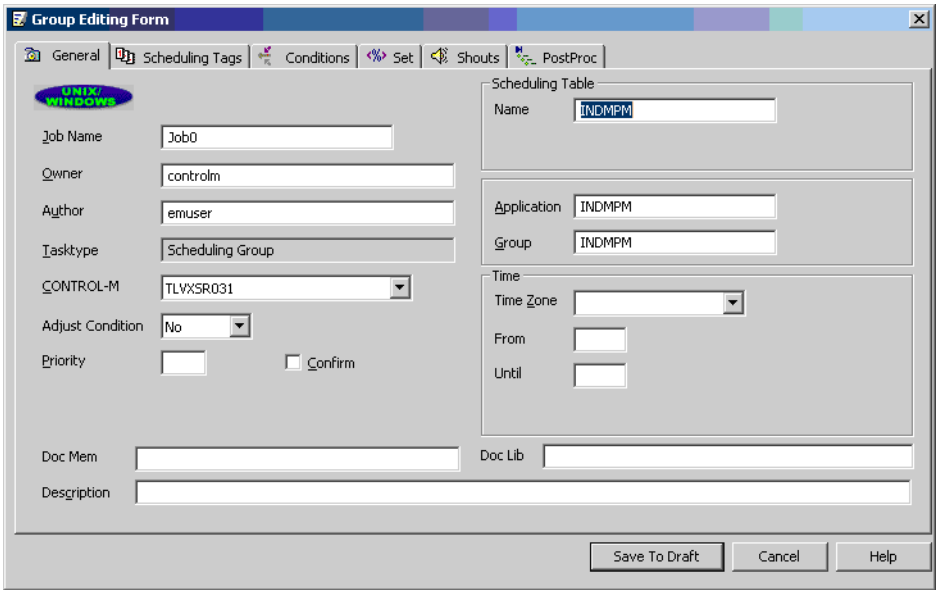


Table 48 Group Editing form panels

Panel Name	Description
General	Parameters identifying the group, application and CONTROL-M installation.
Scheduling Tags	Tagged sets of scheduling criteria that are used by CONTROL-M to determine: When jobs in the group should be ordered. Which conditions must be satisfied before the jobs in the group are submitted for execution. What action follows successful completion of all jobs in the group or unsuccessful completion of a job in the group.
Conditions	Prerequisite IN conditions that must be satisfied for job submission for each job in the group. OUT conditions to be added or deleted on completion of the last job in the group.
Resources	Quantitative and Control resources required for job submission.
Set	AutoEdit variables to be set when each job in the group is submitted.
Shouts	Messages to be sent to various destinations, depending on certain situations, after all the jobs in the group complete their processing.
PostProc	Actions to be performed after all jobs in the group complete their processing, depending on the completion status of the group (**OK** or **NOTOK**).

General panel

The General panel for the Group Editing form identifies the group, application and CONTROL-M installation as well as other miscellaneous parameters.

NOTE

The General panel for an MVS group has a field called **Scheduling Table Lib**. This field does not appear on the General panel for jobs defined for other platforms.

Figure 51 Group Editing form – General panel

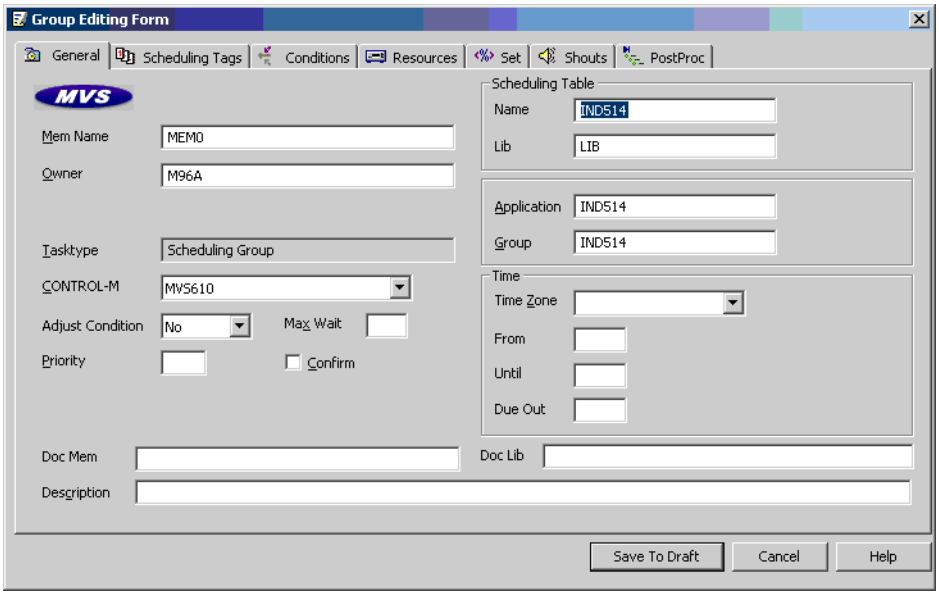


Table 49 describes the parameters in this panel.

Table 49 Group Editing form – General panel parameters

Parameter	Description
Mem Name	Name of the file or member containing the Group definition (sometimes referred to as the *Group entity*).
Owner	Owner (user ID) for the group. This parameter is checked by CONTROL-M security mechanisms to determine if the owner has the necessary authority for the requested actions.
Tasktype	Task type of the group. This value is always **Scheduling Group** for group scheduling tables.
Adjust Condition	Whether jobs in the group scheduling table ignore conditions usually set by jobs in the group scheduling table that are not scheduled.
Priority	Internal job priority under CONTROL-M for the group relative to other groups.
Confirm	When selected, manual confirmation is required before the group scheduling table is submitted for execution.
Maxwait	Number of extra days (beyond the original scheduling date) that the job is allowed to remain in the Active Jobs file awaiting execution.
Name	Name of the group scheduling table.
Lib	Name of the library that contains the group scheduling table. (For MVS groups only)
Application	Name of the application to which the group scheduling table belongs.
Group	Logical name of the group scheduling table.
CONTROL-M	Name of the CONTROL-M to which the group scheduling table belongs.

Table 49 Group Editing form – General panel parameters

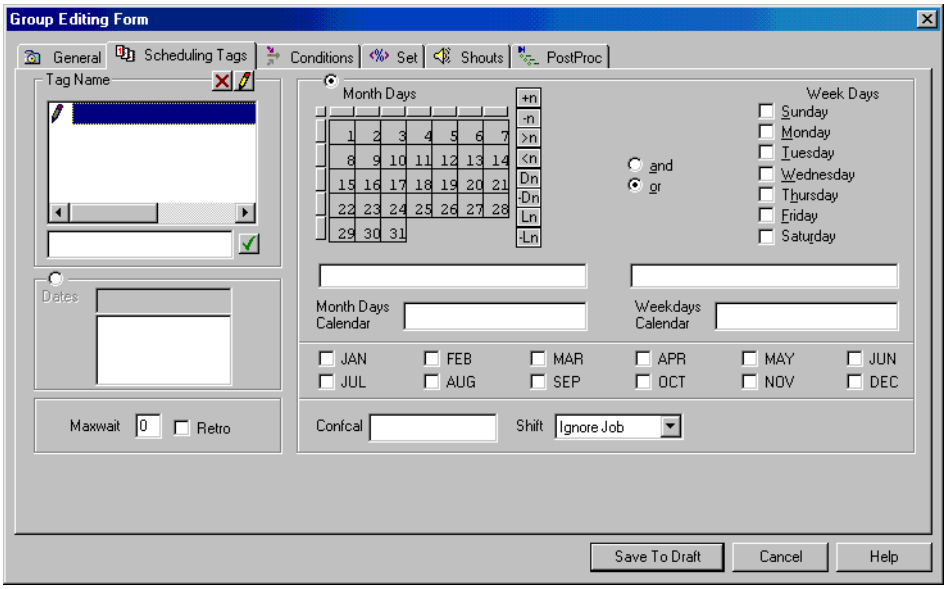
Parameter	Description
Time Zone	The global time zone used to calculate the interval for time-related conditions.
From	Earliest time (in **hhmm** format) that a job in the group scheduling table can be scheduled.
Until	Latest time (in **hhmm** format) that a job in the group scheduling table can be scheduled.
Due Out	Latest time (in **hhmm** format) that the last job in the group scheduling table can end. [MVS only]
	+ *num* Days – Number of days that job execution can be extended after the Odat. This subparameter is relevant only for jobs running in CONTROL-M for z/OS version 6.2.00 or later.
Doc Mem	Name of the file in which group documentation resides. **Note:** To access the documentation, the user must be defined and have authorization on the CONTROL-M where the documentation resides.
Doc Lib	Name of the library/directory containing the documentation file. **Note:** To access the documentation, the user must be defined and have authorization on the CONTROL-M where the documentation resides.
Description	Free-text description of the group.

NOTE

The MVS panel may display differently depending on the version of CONTROL-M for z/OS.

Schedule Tags panel

Figure 52 Group Editing form – Schedule Tags panel



This panel is used to define Schedule Tags for a group scheduling table. Each Schedule Tag definition consists of a Schedule Tag name and a set of scheduling criteria. A Schedule Tag name is unique within a particular group scheduling table. The top left-hand section of the panel lists tags that are currently defined. When a tag in the list is selected, its scheduling parameters are displayed in the other fields of this panel.

After editing an existing tag or defining a new one, click the check button  next to the text box under the list of Tag Names.

The following buttons are available in the Tag Name section:

-  Inserts a new tag above the selected tag.
-  Deletes the selected tag.

Defining a new tag

To add a new tag after the already defined tags:

1 Select the line at the bottom of the list. To add a new tag elsewhere in the list, select the tag above which you want to add the tag, and click the  button. An empty line opens up in the list above the selected tag.

2 Type the tag name in the text box immediately below the tag list.

3 Specify scheduling criteria for the new tag. (See “Defining a Set of Scheduling Criteria.” below.)

4 When all required parameters have been defined, click  or press Enter. The new tag is added to the list of defined tags.

Modifying an existing tag

1 Click on the wanted tag in the list. The tag’s scheduling details are displayed in the scheduling fields.

2 Change the scheduling parameters as required. (See “Defining a Set of Scheduling Criteria”).

3 When you have made all the changes, click  .

Scheduling criteria

Scheduling criteria indicate days of the month, weekdays, dates on which jobs should be scheduled. Each Schedule Tag has its own unique scheduling criteria that can be applied to a job. One of the following types of scheduling criteria can be specified for each Schedule tag:

- **Month Days/Week Days.** A list of days of the month and weekdays on which jobs should be scheduled.
- **Dates.** A list of dates (month and day) on which the jobs should be scheduled.

Each of these sections has an option button. You can specify parameters in only the section whose option button is selected.The parameters of the unchecked section are not available.

The fields of the Schedule Tags panel are described in Table 50.

For more information about scheduling criteria, see "Scheduling panel" on page 105, and the *CONTROL-M Job Parameter and Variable Reference Guide*.

Table 50 Schedule Tags panel parameters

Parameter	Description
Month Days	Days of the month on which to order the job. Days can be written in the **Month Days** text box separated by commas. Usage symbols should appear before the day, e.g. -10, D5. (For more information about usage symbols, see **Days** in the *CONTROL-M Job Parameter and Variable Reference Guide*).
Month Days Calendar	Name of a user-defined calendar (DCAL calendar in CONTROL-M) containing a list of days of the month, used with **Month Days** to determine a set of working days. (For more information, see **Days Calendar** in the *CONTROL-M Job Parameter and Variable Reference Guide*).
and/or	Indicate the relationship between **Month Days** values and **Week Days** values. ■ If **and** is selected, a job should be scheduled only if the day of the month is one of the days in **Month Days**, and the day of the week is one of the days in **Week Days**. ■ If **or** is selected, a job should be scheduled if either the day of the month is one of the days in **Month Days**, or the day of the week is one of the days in **Week Days**.
Weekdays	Day(s) of the week on which to schedule the job. A check box is provided for each day of the week (Sunday through Saturday). Check the boxes for the days on which the job should be scheduled. Alternatively, specify the wanted weekdays in the Data Box below the Weekdays List using the numeric codes according to the site standard. Specified codes should be separated by a comma. (For more information, see **Week Days** in the *CONTROL-M Job Parameter and Variable Reference Guide*) **Example** 1,2,3,4,5 would schedule the job on Monday through Friday (assuming the site standard is 0=Sunday, 1=Monday, ... 6=Saturday).
Weekdays Calendar	Name of a user-defined calendar (WCAL calendar in CONTROL-M) containing a list of weekdays, used with parameter **Week Days** to specify a set of working days.
Months	Months in which to order the job. Each month (**Jan** through **Dec**) is listed individually.

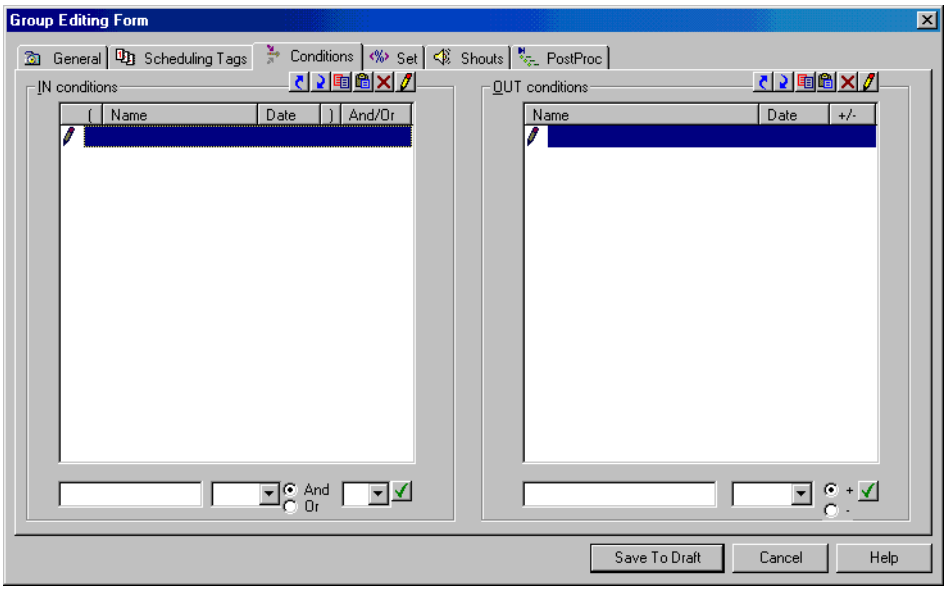
Table 50 Schedule Tags panel parameters

Parameter	Description	
Confcal	Calendar used to confirm job scheduling dates. This parameter uses the following sub-parameters:	
	Name	Name of the calendar.
	Shift Days	The number of days by which to shift the job if the date is not confirmed (i.e, it does not appear in the confirmation calendar, **Confcal**). Choose a value between **-62** and **62**.
Dates	Dates on which to order the job. Valid values are four character dates, in **mmdd** or **ddmm** format (depending on the site standard). Dates are inserted into the list separately. A maximum of twelve dates can be specified. If more dates are required, use a calendar. (For more information, see **Dates** in the *CONTROL-M Job Parameter and Variable Reference Guide*	
Max Wait	Maximum number of extra days (beyond the original scheduling date) the job is allowed to remain in the Active Jobs File awaiting execution, until it is deleted. (For more information, see **Max Wait** in the *CONTROL-M Job Parameter and Variable Reference Guide*.)	
Retro	Indicates whether or not the job should be scheduled for possible execution after its original scheduling date has passed. (For more information, see **Retro** in the *CONTROL-M Job Parameter and Variable Reference Guide*.)	

Conditions panel

The Conditions panel is used to define prerequisite IN and OUT conditions. IN conditions are defined in the left side of this panel. OUT conditions are defined in the right side.

Figure 53 Group Editing form – Conditions panel



Each half of the conditions panel consists of a list of already-defined conditions, and a text box. The text box is used for editing existing conditions or defining new conditions. When you select a condition in the list, its contents are displayed in the Text line.

After editing or creating a condition, click the check button ☑ next to the Text box to save the changes or to add the condition to the list.

NOTE

Even after a condition has been added or changed, the change can be undone or redone (if it was previously undone) using **Ctrl-z** and **Ctrl-y**. For more information, see "Undo and Redo in the Job Editing form" on page 100.

Table 51 describes the buttons that are available for each section of the Conditions panel.

Table 51 Conditions panel buttons

Button	Description
	Enter a new condition.
	Delete the selected condition.
 and 	Change the order of the list.
	Copy data.
	Paste data.

Defining IN conditions

Table 52 describes the fields used to define In conditions for a group.

Table 52 In condition fields

Field	Description	
Name	Name of the prerequisite condition. (Text)	
Date	4-character date reference for the condition. Valid values are:	
	date	A 4-digit date reference in the format **mmdd** or **ddmm**, depending on the site standard.
	offset	+ or - followed by a number from 0 through 999, indicating the number of days in the future (+), or in the past (-), relative to the actual order date. This value is valid only for jobs running in CONTROL-M for z/OS version 6.2.00 or later.
	ODAT	Original scheduling date of the group.
	PREV	Previous scheduling date of the group.
	STAT	The condition is not date-dependent. **Note:** This value is valid only for CONTROL-M/Server version 6.0.01 and above, and for CONTROL-M for OS/390 and z/OS.
	****** or $$$$**	Any scheduling date.
And/Or	Logical relationship between multiple conditions. (Option buttons)	
	Parentheses Box. Used to indicate And/Or relationships. Note: This field is relevant only for MVS groups.	

Defining OUT conditions

Table 53 describes the fields used for defining OUT conditions.

Table 53 Out condition fields

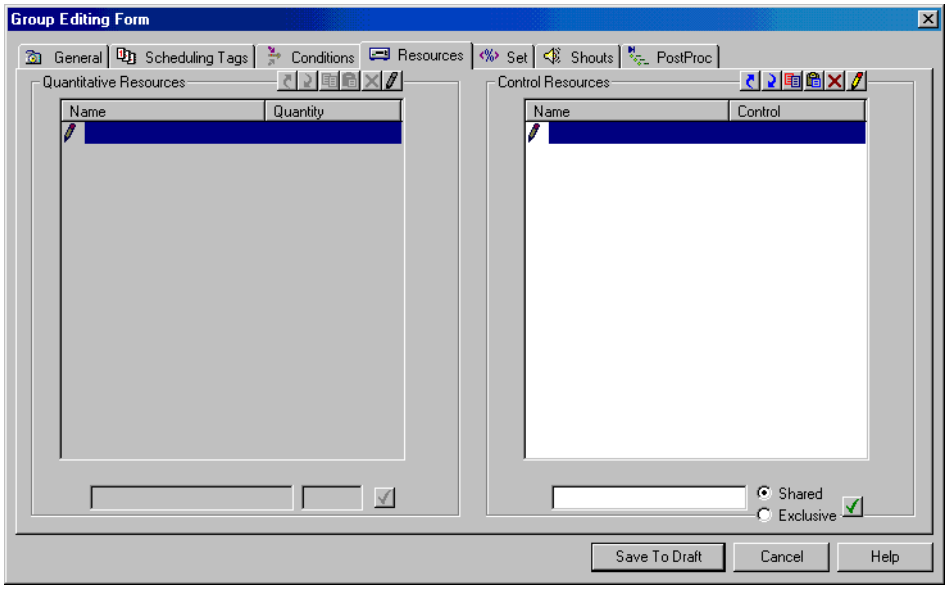
Field	Description	
Name	Name of the prerequisite condition. (Text)	
Date	4-character date reference for the condition. Valid values are:	
	date	A 4-digit date reference in the format **mmdd** or **ddmm**, depending on the site standard.
	offset	+ or - followed by a number from 0 through 999, indicating the number of days in the future (+), or in the past (-), relative to the actual order date. This value is valid only for jobs running in CONTROL-M for z/OS version 6.2.00 or later.
	ODAT	Original scheduling date of the group.
	PREV	Previous scheduling date of the group.
	NEXT	Next scheduling date of the group.
	STAT	The condition is not date-dependent. **Note:** This value is valid only for CONTROL-M/Server version 6.0.01 and above, and for CONTROL-M for OS/390 and z/OS.
	****** or $$$$**	Any scheduling date.
+ / -	Indicates whether to add (+) or delete (–) the condition. (Option buttons)	

Resources panel (MVS)

The Resources panel is used to define Control resources for the group scheduling table. Control resources are defined in the right side.

NOTE

Quantitative resources cannot be defined for the group scheduling table. The Quantitative resources window is not available.



The resources panel includes a list of already-defined resources, and a text box. The text box is used for editing existing resources or defining new resources. When you select a resource in the list, its contents are displayed in the text box.

After editing or creating a resource, click the check button next to the Text box to save the changes or to add the resource to the list.

Table 54 describes the buttons that are available for each section of the Resources panel.

Table 54 Resources panel – Function buttons

Button	Description
	Enter a new resource.
	Delete the selected resource.
 and 	Change the order of the list.
	Copy data.
	Paste data.

Defining Control resources for a job

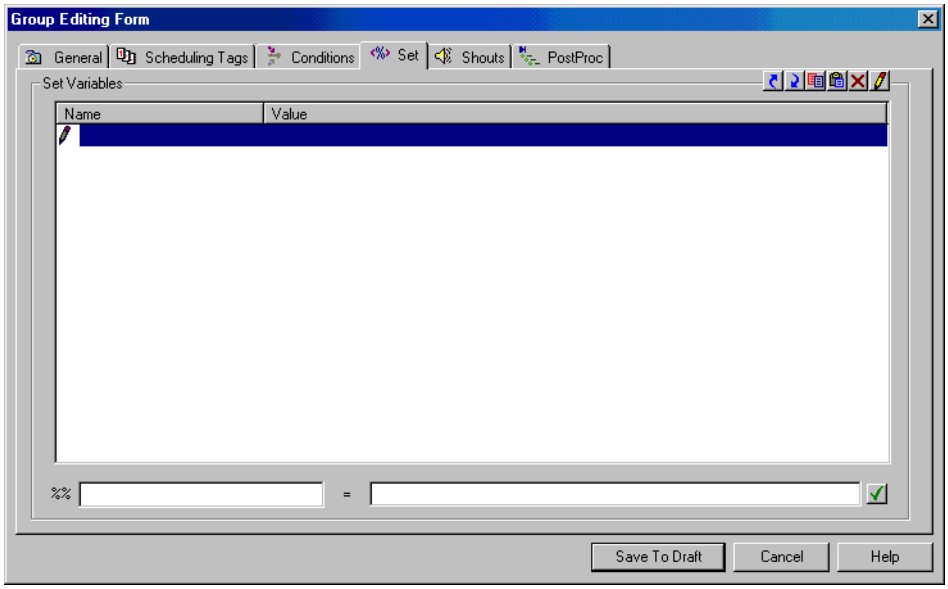
The following fields must be specified for each Control resource:

Name	Name of the resource required by the job. (Text)
Shared/Exclusive	Type of control that the job must have over the resource. (Option buttons)

Set panel

The Set panel is used to specify AutoEdit variables to be resolved before group submission, and in each job's JCL / Script before job submission.

Figure 54 Group Editing form – Set panel



AutoEdit variables that have already been defined for the group are displayed in the central window of this panel. Below this window, is a pair of text boxes for adding new variables and updating existing variables. To edit a variable definition, select it in the list of existing variables, and edit its contents the Text boxes at the bottom of the Set panel.

After editing or creating a variable, click the check button next to the Text line to save the changes or to add the variable to the list.

NOTE

Application-specific job parameters may not be specified in AutoEdit variables. The names of application-specific job parameters are prefixed by two percent signs, the application's abbreviation and a hyphen (%%SAPR3- for SAP, %%OAP- for Oracle, and so on).

For more information about definition of AutoEdit variables, see **Do AutoEdit** in the *CONTROL-M Job Parameter and Variable Reference Guide*.

For general information about the AutoEdit facility, see the *CONTROL-M Job Parameter and Variable Reference Guide*.

NOTE

Even after data has been added or changed, the change can be undone or redone (if it was previously undone) using **Ctrl-z** and **Ctrl-y**. For more information, see "Undo and Redo in the Job Editing form" on page 100.

Table 55 describes the buttons that are available for the Set panel.

Table 55 Set Panel – Function Buttons

Button	Description
	Enter a new variable.
	Delete the selected variable.
 and 	Change the order of the list.
	Copy data.
	Paste data.

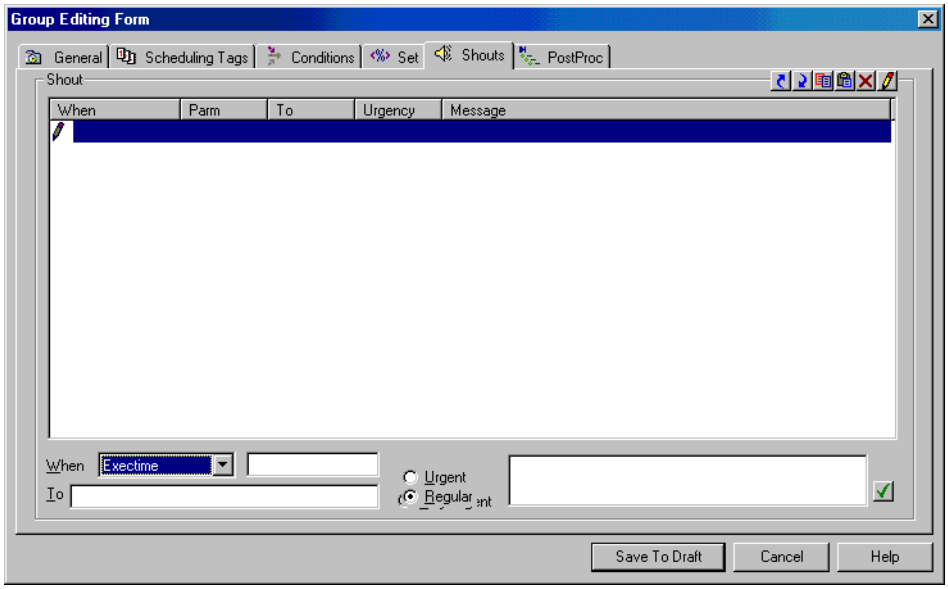
Shouts panel

This panel is used to specify shout messages to be sent on group completion (that is, completion of the last job in the group).

NOTE

This panel may display differently depending on the version of the platform (such as CONTROL-M for z/OS, which has an additional column for days offset.

Figure 55 Group Editing form – Shouts panel



The Shouts panel describes messages to be sent (*shouted*) to various destinations. The panel includes a list of previously defined Shout statements for the group. Below this list is series of fields for specifying additional Shout statements.

- Table 56 describes the buttons that are available for use with Shout statements.
- Table 57 describes the fields that are used for definition of Shout statements.

After editing or creating a Shout message, click the check button ✓ to save the changes and / or add the message to the list.

NOTE

Even after shout data has been added or changed, the change can be undone or redone (if it was previously undone) using **Ctrl-z** and **Ctrl-y**. For more information, see "Undo and Redo in the Job Editing form" on page 100.

Table 56 Shout panel buttons

Button	Description
	Enter a new message.
	Delete the selected statement.
and	Change the order of the list.
	Copy data.
	Paste data.

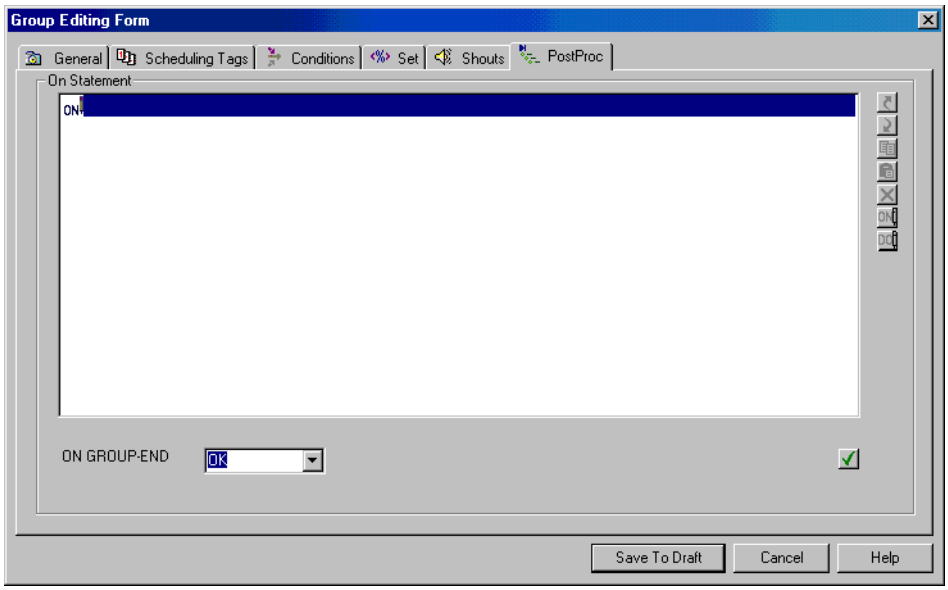
Table 57 Shout panel parameters

Parameter	Description	
When	Indicates the conditions under which the messages should be issued. Valid values are:	
	OK	All jobs in the group ended with **OK** status.
	NOTOK	At least one job in the group ended **NOTOK**.
	Late Sub	First job in the group was submitted after the submission time limit. The time must be specified in **HHMM** format, where **HH** is **00**-**23** and **MM** is **00**-**59**.
	Late Time	Last job in the group completed after the completion time limit. The time must be specified in **HHMM** format, where **HH** is **00**-**23** and **MM** is **00**-**59**.
	EXECTIME	The message is sent if the elapsed runtime of the group is outside a specified limit. The limit, which is set in the Parm field of the Group Editing Form Shouts panel, can be expressed as a runtime limit, or as a deviation from the average runtime of the group. Valid formats for the limit are:
		■ **+n%** – The message is sent if the elapsed runtime of the group exceeds its average execution time by at least n%. n is a number from 1 through 900.
		■ **–n%** – The message is sent if the elapsed runtime of the group is at least n% less than its average execution time. n is a number from 1 through 99.
		■ **>n –** The message is sent if the elapsed runtime of the group is greater than n minutes. n is a number from 1 through 999.
		■ **<n –** The message is sent if the elapsed runtime of the group is less than n minutes. n is a number from 1 through 999.
		■ **+n –** The message is sent if the elapsed runtime of the group exceeds its average execution time by at least n minutes. n is a number from 1 through 999.
		■ **-n –** The message is sent if the elapsed runtime of the group is at least n minutes less than its average execution time. n is a number from 1 through 999.
To	Destination to which the message should be sent.	
Very Urgent **Urgent** **Regular**	These option buttons indicate the urgency level of the shout.	
message area	This text box to the right of the other fields is used to specify the contents of the message. Use Ctrl+Enter to move to a new line.	

PostProc panel

The panel indicates conditional post processing actions to be performed when the last job in the group finishes processing, depending on the successful or unsuccessful completion of all the jobs in the group.

Figure 56 Group Editing form – PostProc panel



Each item in this panel indicates either an ON statement, or a DO statement. ON statements indicate conditions under which specified actions should be performed. DO statements indicate actions to be performed when the preceding ON statements are satisfied.

The definition line below the list of statements can be toggled between fields for ON statements and fields for DO statements.

- Table 58 describes the buttons that are available in the PostProc panel.
- Table 59 describes the fields that are used for definition of DO statements.
- On statement fields are described in the following section, "ON statement definition line."

Table 58 PostProc Panel buttons (Part 1 of 2)

Button	Description
DO	Displays the DO statement definition line.
ON	Displays the ON statement definition line.
	Delete the selected statement.
and	Change the order of the list.

Table 58 PostProc Panel buttons (Part 2 of 2)

Button	Description
	Copy data.
	Paste data.

ON statement definition line

ON statements for groups contain the ON GROUP-END field. Choose either **OK** or **NOTOK** from the list. This field is used to indicate whether the specified DO actions should be performed when all the jobs in the group end successfully (**OK**) or when at least one job in the group ended unsuccessfully (**NOTOK**).

After editing or creating an ON statement, click the check button  at the corner of the Step Codes section to save the changes and / or add the statements to the list.

NOTE

Even after data has been added or changed, the change can be undone or redone (if it was previously undone) using **Ctrl-z** and **Ctrl-y**. For more information, see "Undo and Redo in the Job Editing form" on page 100.

DO statement definition line

This line is used to define DO actions to be performed when the ON GROUP-END condition is satisfied. To display this line, click the DO button  .

When you select a DO action from the list, the appropriate subparameters are displayed.

Available DO actions and their subparameters are described in Table 59.

Table 59 Postproc Panel (groups) – valid DO statements (Part 1 of 2)

DO statement	Description	
DO OK	Sets the group's completion status to **OK** regardless of the group's completion status. No subparameters.	
DO NOTOK	Sets the group's completion status to **NOTOK** regardless of the group's completion status. No sub-parameters.	
DO Set-Var	Assigns a value to an AutoEdit variable. Note: In the CONTROL-M/EM, this parameter is known as **Do AutoEdit**. The following subparameters are displayed:	
	Name	Name of the AutoEdit variable to be set.
	Value	Value to which the variable should be set. The value must be either a constant or resolvable. This value cannot contain application-specific job parameters. The names of application-specific job parameters are prefixed by two percent signs, the application's abbreviation and a hyphen (%%SAPR3- for SAP, %%OAP- for Oracle, and so on).
DO Shout	Specifies messages to be sent ("shouted") to different destinations. The following subparameters are displayed:	
	Destination	Destination to which the message should be sent.
	Urgency	Urgency of the shout: Regular, Urgent, Very Urgent.
	MSG	Message to be sent. Use Ctrl+Enter to move to a new line.
DO Force-job	Forces a job or a complete scheduling table to be ordered under CONTROL-M regardless of the scheduling criteria. **Note:** When Do Forcejob forces a job that belongs to a group, it treats it as a regular job and forces it alone (that is, without a Group Entity). The following subparameters are displayed:	
	SCD Table	Name of the scheduling table containing the job to be forced.
	Job Name	Name of the job to be forced.
	Date	Scheduling date of the job to be forced. Valid values: **ODAT**, or a specific 4 or 6 character date reference (**mmdd**, **ddmm**, **yymmdd**, or **yyddmm** format, depending on the site standard). For MVS: Only **yymmdd** or **yyddmm** format can be used.
	Library	[MVS only] Name of the library containing the specified scheduling table.

Table 59 Postproc Panel (groups) – valid DO statements (Part 2 of 2)

DO statement	Description	
DO Condition	Specifies prerequisite conditions to be added or deleted. The following subparameters are displayed:	
	Name	Name of the prerequisite condition.
	Date	Date of the prerequisite condition. Valid values: A specific date (in mmdd or ddmm format), or one of the following 4-character literals: **ODAT**, **PREV**, **NEXT**, **STAT**, or **$$$$**. Note that **$$$$** is only valid when deleting a condition.
	+ / -	Indicates whether to add (+) or delete (-) the condition.
DO Mail	Sends a brief message when the specified On condition is fulfilled.	
	To	The e-mail address of the recipient of the DO Mail message.
	Regular or **Urgent**	Priority for the shout message. Select the option button the reflects the level of urgency for the specified message; **Regular**, or **Urgent**.
	Subject	A brief message that can describe the contents of a longer message.
	CC	The e-mail address of an additional recipient of the DO Mail message. Optional.
	text box	The text of the message to be sent.

After editing or creating a DO statement or ON statement, click the check button to save the changes and / or add it to the list. For more information about DO parameters and ON parameters, see the *CONTROL-M Job Parameter and Variable Reference Guide*.

Exiting the Group Editing form

To close the Group Editing form:

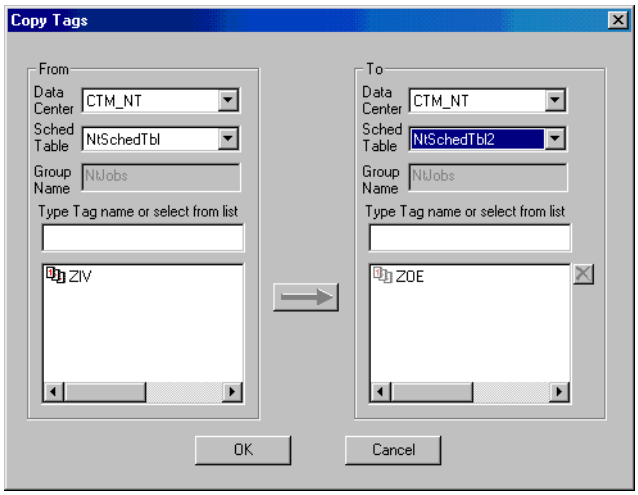
1 Click one of the following:

- **Save to Draft** to apply the changes you made in the Group Editing form if you are working in local load mode.
- **Save to Database** to apply the changes you made in the Group Editing form if you are working in online load mode.
- **Cancel**. to cancel the changes you made in the Group Editing form.

Changes applied in the Group Editing form are immediately applied to the draft views in other panes and windows.

Copy Tags window

This window enables the user to copy Schedule Tags from one group scheduling table to another.



To open the Copy Tags window:

Choose **Edit => Scheduling Group** => **Copy Tags** from the menu bar.

-or-

Click the **Copy Tags**  button.

The Copy Tags window contains a **From** section and a **To** section. These sections provide the information about the table from which to copy the tag and the table to which to copy it.

To copy a tag from one table to another:

1. Choose the data center from which you want to copy the Schedule Tag, from the list of data centers in the **From** section of the window.

2. Choose the group scheduling table from which you want to copy the Schedule Tag, from the list of group scheduling tables in the From section. The name of the group is displayed in the **From Group Name** text box.

3. Choose the data center to which you want to copy the Schedule Tag, from the list of data centers in the **To** section.

4. Choose the group scheduling table to which you want to copy the Schedule Tag, from the list of group scheduling tables in the To section. The name of the group is displayed in the **To Group Name** text box.

5. Select the tag you want to copy from the list of tags in the **From** section by clicking on it.

   -or-

   Type the tag name in the text box above the schedule tag list in the **From** section.

6. Click the Arrow button. The selected tag is added to the list of tags in the **To** section.

7. Click **OK** to save the current list of tags in the **To** section.

NOTE

For MVS groups, only uppercase letters are allowed in tag names.

Tag names for groups on non-MVS platforms are case sensitive.

Filtering data using collections

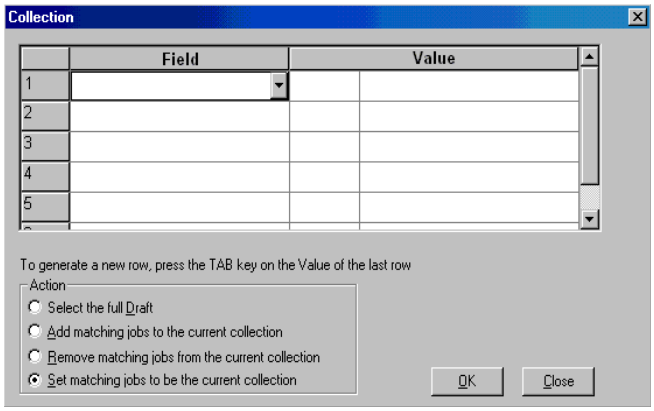
In CONTROL-M / Desktop, a collection is defined as a selection of jobs in a draft. CONTROL-M / Desktop allows you to filter the current draft into various collections according to specified criteria. These collections can then be used for filtered viewing, search and replace techniques, and mass updates.

By default, the collection on which you work contains all the jobs in the current draft. You can adjust this collection as often as necessary using the Collection Criteria form.

To filter the draft according to specified criteria:

Choose **Tools => Collection** or click the **Edit Collection** button on the toolbar. The following dialog box is displayed:

Figure 57 Collection Criteria Dialog Box



Defining Collection criteria

The Collection Criteria dialog box contains an empty table in which fields, operators and values can be specified. These values act as selection criteria for filtering the draft. The field values are compared against the parameters in job processing definitions to determine if the job should be included in the collection.

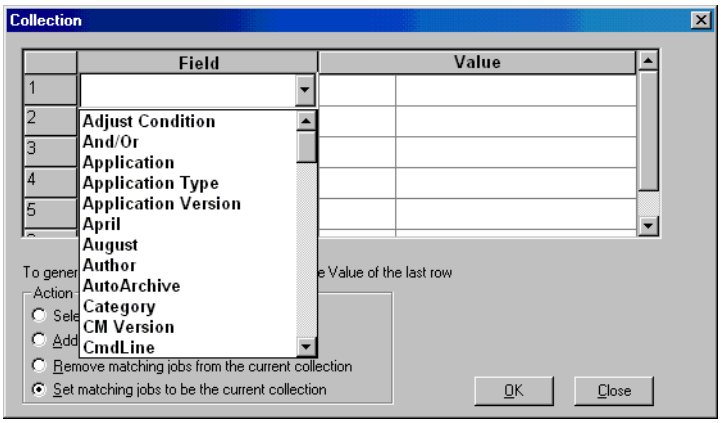
The Collection Criteria table contains the following columns:

Table 60 Collection Criteria dialog box columns

Column	Description
Field	Field to be checked in the job processing definition.
Operator	Operator to be applied to the specified value (e.g., =, >).
Value	Value that determines whether or not the criteria are satisfied.

Cells in the Field column are filled using a list box. Figure 58 shows the available fields.

Figure 58 Collection Criteria – Field drop-down list



NOTE

Certain CONTROL-M / Desktop fields correspond to values for CONTROL-M parameters (for example, August is a value for parameter MONTHS).

The Operator column in the table is also a List box. Figure 59 shows the available operators. These operators are described in Table 61.

Figure 59 Collection Criteria – Operators drop-down list

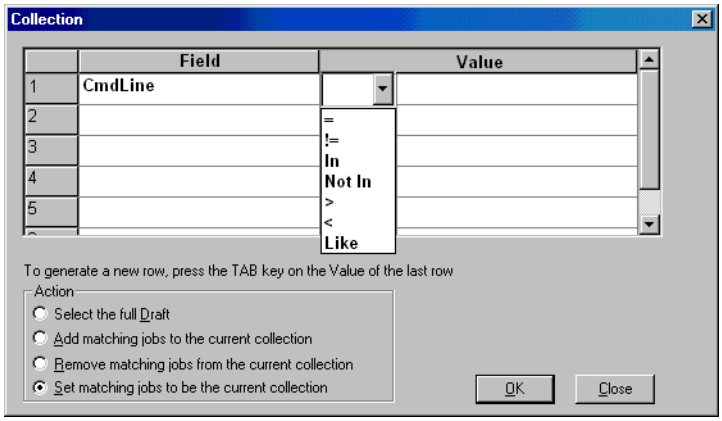


Table 61 Collection Criteria – Operators

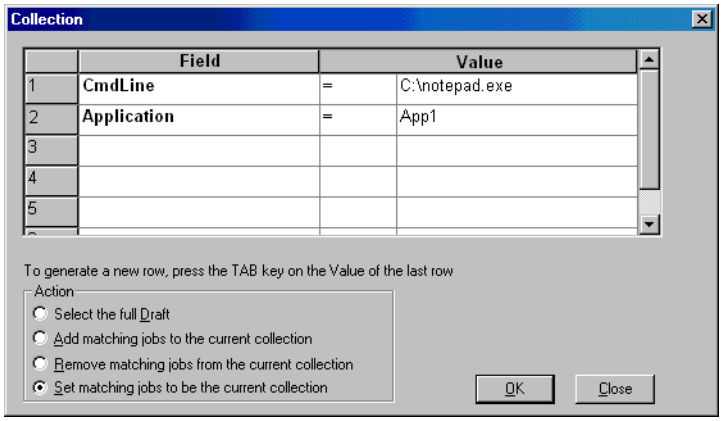
Operator	Description
=	Value in the job must equal the value in the table.
Like	Use of wild card * in the value field.
>	Value in the job must be greater than the value in the table.
<	Value in the job must be less than the value in the table.
!=	Value in the job must not equal the value in the field.
In	Value in the job matches a listed value. Use commas to separate the values.
Not In	Value in the job does not match any of the values listed in the value field. Use commas to separate the values.

Example

The following collection includes only jobs that meet both of the following criteria:

- Job name begins with JOB4.
- Job belongs to a group whose name begins with GRP5.

Figure 60 Sample collection criteria



Specifying the selection action

The Collection window also contains an Action box that is used to specify the way in which the selection criteria are applied.

Specify one of the following options:

- Select the full draft.
- Add the matching jobs to the current collection.
- Remove the matching jobs from the current collection.
- Set the matching jobs to be the current collection (meaning, the collection consists only of those jobs matching the currently specified criteria).

The fields and values in the collection criteria are compared with the parameters each job processing definition to determine if it should be included in the collection. For a job to be selected, it must match all specified criteria.

NOTE

All rows of collection criteria table must be satisfied for each job in the collection. To use different sets of selection criteria for a single collection, fill in the first set of criteria to create the new collection, and then fill in the table again for each addition set of criteria and use the **Add matching jobs ...** option to add the appropriate jobs to the current collection.

Chapter 7

Managing scheduling tables

Job processing definitions are organized into scheduling tables according to various criteria. For example, jobs that are generally run together (concurrently or sequentially) are usually placed in the same scheduling table.

The Scheduling Table Manager of CONTROL-M/Desktop can be used to define and maintain scheduling tables. This feature enables the user to create new scheduling tables, modify, delete, force, or order existing tables, and upload and download scheduling tables to/from CONTROL-M/Server databases on relevant CONTROL-M platforms.

Scheduling tables are displayed as nodes in the CONTROL-M/Desktop Draft window Navigation Tree and Flow Diagram.

The uploading and downloading of scheduling tables between CONTROL-M/Desktop and the CONTROL-M/EM database is discussed in "Moving from definition to production: an overview" on page 23.

The chapter discusses how to use the Scheduling Table Manager to work with scheduling tables.

NOTE

You can convert an existing scheduling table to a group scheduling table using the **copydefjob** utility. This change enables you to take advantage of group processing of jobs. For more information, see the **copydefjob** utility description in the *CONTROL-M/Enterprise Manager Utility Guide*.

To define, maintain and control scheduling tables in the CONTROL-M/EM database, use the Scheduling Table Manager window. This window allows you to:

- View a list of all scheduling tables in the CONTROL-M/EM database.
- Modify or delete existing scheduling tables, or create a new one.
- Copy an existing scheduling table.

- Force or order one or more scheduling tables.
- Upload new or modified tables to the CONTROL-M/Server database in a specified CONTROL-M installation.
- Download tables from a CONTROL-M/Server database to the CONTROL-M/EM workstation.
- View the details for all the jobs in a selected table.

NOTE

If a table that is associated with more than one User daily is modified using CONTROL-M/EM and then uploaded to CONTROL-M, that table is removed from all User Dailies except the one that is associated with it in CONTROL-M/EM.

NOTE

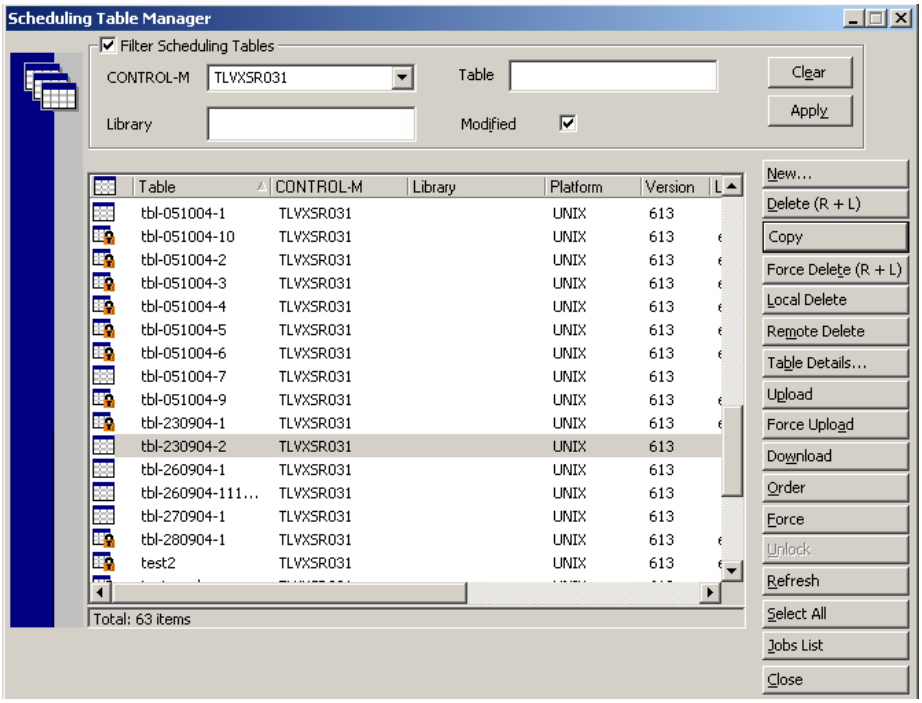
You can convert an existing scheduling table to a Group scheduling table using the **copydefjob** utility. This change enables you to take advantage of group processing of jobs. For more information, see the **copydefjob** utility description in the *CONTROL-M/Enterprise Manager Utility Guide*.

To open the Scheduling Table Manager window,

1 In the CONTROL-M/Desktop window menu, either select **Edit => Scheduling Tables => Scheduling Table Manager** or click .

The Scheduling Manager window is displayed.

Figure 61 Scheduling Table Manager window



- The fields at the top of this window can be used to filter the scheduling tables that are displayed. These fields are described in Table 62. Pattern matching rules used for filtering are described in "Specifying Pattern-Matching strings" on page 39.
- The columns in the Scheduling Table Manager window are described in Table 63, and can be clicked to sort the scheduling tables in the window.
- Buttons on the right side of this window offer a wide variety of actions that can be performed on scheduling tables selected in this window. These buttons are described in Table 64 on page 198.

Table 62 Filter fields – Scheduling Table Manager (Part 1 of 2)

Field	Description
Filter	When selected, this check box indicates that the filter criteria should be applied.
CONTROL-M	List scheduling tables only for the specified CONTROL-M installation.
Table	List the specified scheduling tables only.

Table 62 Filter fields – Scheduling Table Manager (Part 2 of 2)

Field	Description
Library	[For MVS users] List scheduling tables for the specified library only.
Modified	Toggles between display of only Modified (÷) tables, tables that have not been modified (blank), or both (gray).

Table 63 Column descriptions – Scheduling Table Manager

Column	Description
CONTROL-M	Name of the CONTROL-M.
Table	Name of the scheduling table (1-20 characters, case sensitive).
Library	[For MVS users] Name of the library in which the scheduling table is located.
Platform	Type of CONTROL-M platform.
Version	Version of CONTROL-M.
Locked by	Name of the CONTROL-M/EM user currently modifying the scheduling table. A scheduling table can be modified by only one user at a time.
User Daily	Identifier used to assign the scheduling table to a specific User Daily Job (1-10 characters, case-sensitive). If "SYSTEM" (uppercase only) is specified, the scheduling table is ordered by the New Day procedure. The New Day procedure and User Daily Jobs are described in the *CONTROL-M/Enterprise Manager User Guide*. **Note for MVS users:** Assignment of the scheduling table to the New Day procedure or to a specific User Daily Job is described in Section 5 of the (mainframe) *CONTROL-M User Manual*.
Modified	Yes indicates that the scheduling table has been updated but not yet uploaded.
Last Upload	Time (24 hour format) of last upload of the scheduling table to the CONTROL-M/Server database in the indicated installation.

Table 64 Command buttons – Scheduling Table Manager (Part 1 of 3)

Button	Description
New	Opens the Scheduling Table dialog box to enable definition of a new scheduling table. For more information, see "Creating or modifying scheduling tables" on page 200.
Delete (R + L)	Deletes the table from both the CONTROL-M/EM and CONTROL-M/Server databases. For more information, see "Table Synchronization" in the *CONTROL-M/Enterprise Manager User Guide*.
Force Delete (R + L)	Deletes the table from both the CONTROL-M/EM and CONTROL-M/Server databases, regardless of whether or not a later version of the table exists in the CONTROL-M/Server database.
Local Delete	Deletes the table from the CONTROL-M/EM database only.
Remote Delete	Deletes the table from the CONTROL-M/Server database only.

Table 64 Command buttons – Scheduling Table Manager (Part 2 of 3)

Button	Description
Copy	Opens the Copy Scheduling Table dialog box to enable the copying of a scheduling table. For more information, see "Creating or modifying scheduling tables" on page 200.
Table Details	Displays a window from which you can modify the selected scheduling table. This window is described in "Creating or modifying scheduling tables" on page 200.
Upload	Copies the selected scheduling table to the specified CONTROL-M/Server database. Upload is a background process. You can perform other actions during transmission. On completion, the Modified field changes to No. ■ If the scheduling table in the CONTROL-M/Server database is a more recent version, a message appears indicating that the Upload is not allowed. This restriction can be overridden using the Force Upload option (described below). ■ To upload or download multiple scheduling tables, hold down the <Ctrl> key and select the required tables.
Force Upload	Copies the selected scheduling table to the specified CONTROL-M/Server database, regardless of whether a more recent version of the table exists in the CONTROL-M/Server database. Upload is a background process. you can perform other actions during transmission. On completion, the Modified field changes to No.
Download	Copies the selected scheduling table from the CONTROL-M/Server database to the CONTROL-M/EM database. Download is a background process. You can perform other actions during transmission. On completion, the Modified field changes to No. To download a scheduling table that is not displayed in the Scheduling Table Manager window, create the scheduling table and then download the scheduling table normally.
Order	Orders the selected table. scheduling tables can also be ordered from the Order/Force Jobs window in CONTROL-M/EM. When **Order** is clicked, a dialog box is displayed in which you specify the order date. Specify either **ODAT** or a specific date. For more information, see "Ordering or Forcing Jobs or Scheduling Tables" in the *CONTROL-M/Enterprise Manager User Guide*.
Force	Forces the selected table. scheduling tables can also be forced from the Order/Force Jobs window in CONTROL-M/EM. When **Force** is clicked, a dialog box is displayed in which you specify the force date. Specify either **ODAT** or a specific date. For more information, see "Ordering or Forcing Jobs or Scheduling Tables" in the *CONTROL-M/Enterprise Manager User Guide*.

Table 64 Command buttons – Scheduling Table Manager (Part 3 of 3)

Button	Description
Unlock	Unlocks the selected scheduling table to allow modification by a different user.
Refresh	Refreshes the status of the scheduling tables in the window.
Select All	Selects all scheduling tables displayed in the window. **Note**: This option is not available if all of the scheduling tables are already selected.
Jobs List	Opens a window containing a list of all of the jobs contained in the scheduling table. This window is described in "Jobs List window" on page 204.

Creating or modifying scheduling tables

When you click **New** or **Update** in the Scheduling Table Manager window, the Scheduling Table dialog box is displayed. This window enables you to define new scheduling tables and edit existing ones.

The fields of this dialog box are described in Table 65.

Figure 62 Scheduling Table dialog box

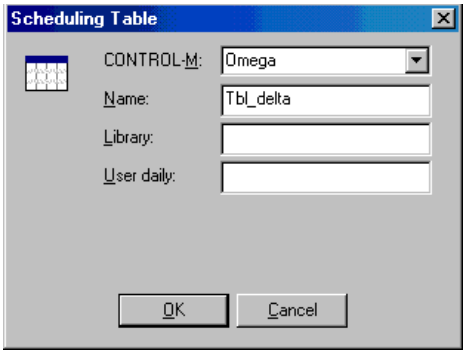


Table 65 Scheduling Table dialog box fields (Part 1 of 2)

Field	Description
CONTROL-M	Name of the CONTROL-M installation.
Name	Name of the scheduling table (1-20 characters, case sensitive, no blanks).

Table 65 Scheduling Table dialog box fields (Part 2 of 2)

Field	Description
Library	[MVS] Name of the library in which the scheduling table is located.
User Daily	(Optional) Identifier used to assign the scheduling table to a specific User Daily Job (1-10 characters, case sensitive). If "SYSTEM" (uppercase only) is specified, the scheduling table is ordered by the New Day procedure. The New Day procedure and User Daily Jobs are described in the *CONTROL-M/Enterprise Manager User Guide*. [MVS] Documentation purposes only. Assignment of the scheduling table to the New Day procedure or to a specific User Daily Job is described in Section 5 of the (mainframe) *CONTROL-M User Manual*.

To define a new scheduling table:

1 In the Scheduling Table Manager window, click **New**. The **Scheduling Table** dialog box (Figure 62 on page 200) opens.

2 Specify criteria for the new scheduling table in the dialog box, and click **OK**.

The scheduling table is added to the CONTROL-M/EM database.

To change details of an existing scheduling table:

1 In the Scheduling Table Manager window, select a scheduling table and click **Update**.

The **Scheduling Table** dialog box (Figure 62 on page 200) displays details of the selected scheduling table.

NOTE

You must be authorized to modify scheduling tables. Otherwise, the fields of the dialog box are unavailable.

2 Modify the scheduling table criteria and click **OK**.

The changes are saved in the CONTROL-M/EM database.

Copying a scheduling table

You can copy an existing scheduling table to the same or a different CONTROL-M.

To copy a scheduling table:

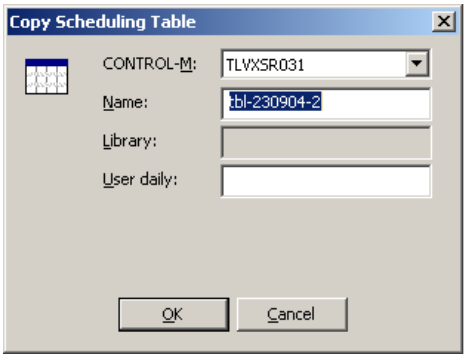
1 In the Scheduling Table Manager window, select the scheduling table to be copied, and click **Copy** (or **Ctrl + C**).

The **Copy Scheduling Table** dialog box displays details of the selected scheduling table.

NOTE

Depending on defaults set in the Confirmations panel of the Options dialog box, a confirmation prompt may be issued before the Copy Scheduling Table dialog box is displayed. For information on the Options dialog box, see Chapter 11, "Customization."

Figure 63 Copy Scheduling Table dialog box



2 Specify a new table name in the **Name** field (for the target scheduling table).

3 Modify other criteria as wanted, and click **OK**.

The changes are saved in the CONTROL-M/EM database.

Ordering and forcing scheduling tables

NOTE

When copying a scheduling table, note the following:

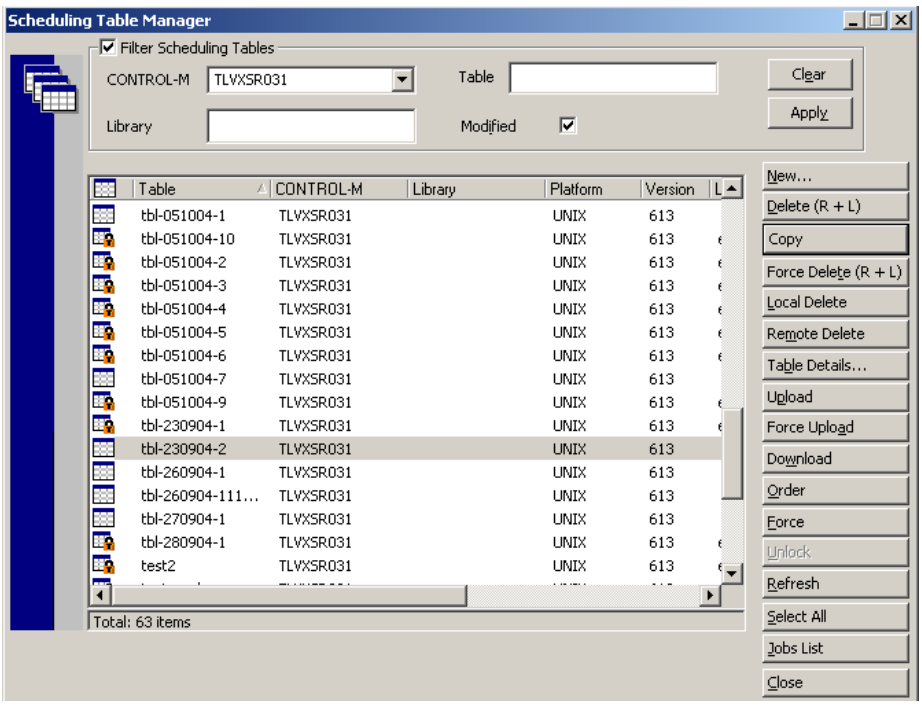
- Only one table may be selected, and it must be unlocked at the time of the copy.
- You must be authorized to copy scheduling tables (or the fields are unavailable).
- The **Library** field is only enabled in CONTROL-M for z/OS.
- The new table name you specify must be unique to the particular CONTROL-M.
- If you specify a different target CONTROL-M, it must be the same platform and version as the scheduling table source CONTROL-M.

You can order and force scheduling tables in both CONTROL-M/Desktop and CONTROL-M/EM. For instructions on ordering and forcing scheduling tables in CONTROL-M/EM, see the *CONTROL-M/Enterprise Manager User Guide*.

To order or force scheduling tables from within CONTROL-M/Desktop:

1 In the CONTROL-M/Desktop window menu, either select **Edit => Scheduling Tables => Scheduling Table Manager** or click . The Scheduling Manager window is displayed.

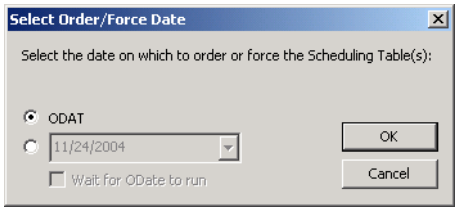
Figure 64 Scheduling Table Manager window



2 Select the line(s) for the scheduling tables that you want to order or force.

3 Click either **Order** or **Force**.

4 If a confirmation dialog box displays, click **Yes**. The following dialog box is displayed.

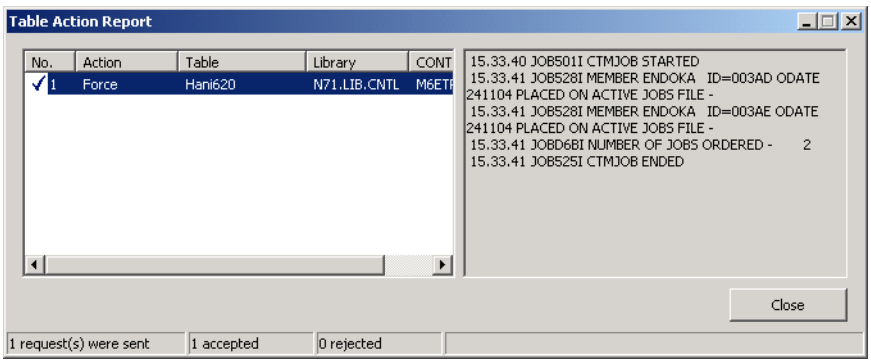


The default order/force date depends on the CONTROL-M version. For CONTROL-M versions 6.0.0 and higher, the default date is the CONTROL-M ODAT; for versions prior to 6.0.0, the default date is the CONTROL-M/EM machine date.

5 To assign a different date than the default date, click the button by the date selection field, and select the desired date.

6 For a job running under CONTROL-M for z/OS version 6.2.00 or later, to ensure that it does not run before the **Odate**, check the **Wait for Odate to run** check box. (If this check box is not checked, the job runs as soon as the execution criteria are satisfied.)

The Table Action Report is displayed, reporting the progress of the order or force.



7 Click **Close**.

Jobs List window

The Jobs List window lists the jobs and group scheduling tables comprising a selected scheduling table. By default, all jobs and group scheduling tables are displayed. However, you can apply a filter to display only selected jobs.

You can modify the processing definitions of jobs and group scheduling tables displayed in the Jobs List window. You can also use the Jobs List window to delete or create new job definitions and group scheduling tables. Modifications are applied to the CONTROL-M/EM database.

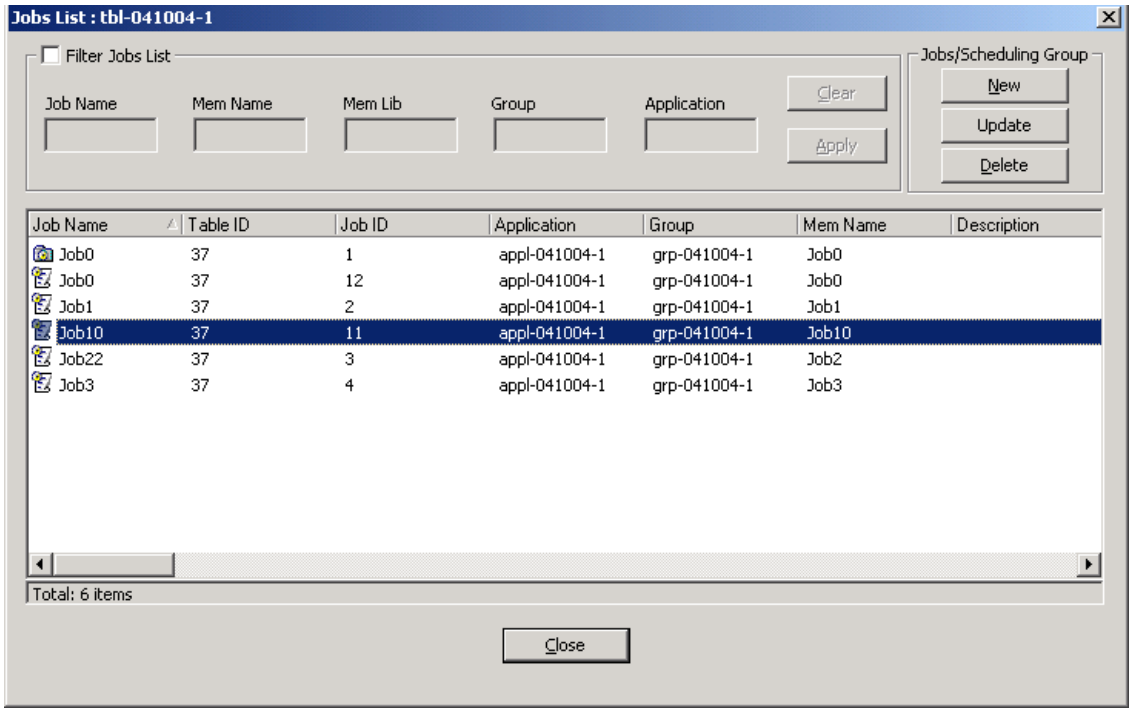
To display the Jobs List for a scheduling table:

1 In the Scheduling Table Manager window, select the scheduling table from the list.

2 Click **Jobs List**, or double-click the selected scheduling table name.

The **Jobs List** window is displayed.

Figure 65 Jobs List window



The name of the scheduling table appears in the title bar. If the scheduling table is locked, the phrase **[Read Only]** also appears in the title bar.

- The fields at the top of this window can be used to filter the jobs that are displayed. These fields are described in Table 66. Pattern matching rules used for filtering are described in "Specifying Pattern-Matching strings" on page 39.

- The columns in the Job List window display job definition parameters. For parameter descriptions, see the *CONTROL-M Job Parameter and Variable Reference Guide*.

- Buttons on the right side of this window offer a wide variety of actions that can be performed on jobs selected in this window. These buttons are described in Table 67 on page 206.

Table 66 Filter fields – Job List window

Field	Description
Job Name	Name of the job.
Mem Name	Name of a file containing a job script.
Mem Lib	Name of a library / directory in which a job script is located.
Group	Name of a group of jobs.
Application	Name of an application. Used to supply a descriptive name to a set of related groups of jobs.

Table 67 Command buttons – Jobs List window

Element	Description
Clear	Clears filter criteria from the filter fields.
Apply	Applies the specified filter.
Close	Closes the Jobs List window.
New	Opens a new Job Editing form (for an undefined job). It can also create a scheduling group if the scheduling table is empty. Unavailable if the table is locked or if the user is not authorized to open a job in the table.
Update (View)	Displays the currently selected job in the Job Editing form for update. (If the scheduling table is currently locked, or the user is not authorized to update the table or its jobs, the button says **View**, and opens the job for viewing only.)
Delete	Deletes the currently selected job definition or scheduling group. Unavailable if the table is locked or the user is not authorized to delete the table or its jobs.

Filtering the jobs list

To filter jobs in the Jobs List window based on values:

1 Select the **Filter Jobs List** check box, and enter valid values into any or all of the filter text boxes described in Table 66. (If wanted, click **Clear** to remove filter criteria from the filter fields.)

NOTE

Pattern-matching special characters can be used for filtering. For details, see "Specifying Pattern-Matching strings" on page 39.

2 Click **Apply** to apply the filter.

All applicable jobs in the scheduling table are displayed.

NOTE

The Group entity in the Group scheduling table is always displayed, regardless of specified filtering criteria.

Displaying, editing, and deleting job definitions in the Job Editing form

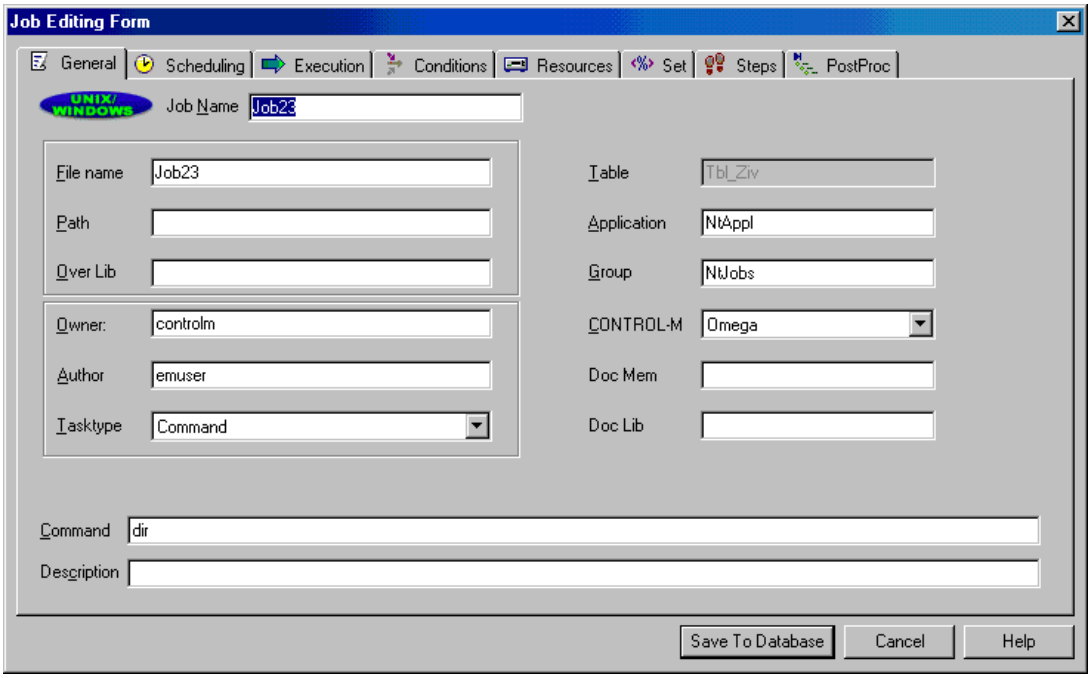
NOTE

Any changes made to a definition in a Job Editing form or a Group Editing form are written directly to the Definition section of the CONTROL-M/EM database.

To display and edit details of an existing job or group scheduling table:

1 Either select the job in the list and click **Update**, or double-click the job (or Group scheduling table) in the list.

The job definition is displayed in the Job Editing form (or Group Editing form).



NOTE

If the scheduling table is locked (for example, if it is in use by another user) a **View** button replaces the **Update** button. In this case, and depending on defaults set in the Confirmation panel of the Options window, either the Job Editing form is automatically opened for viewing only, or you are asked whether you want to see a copy the Job Editing form for viewing only. Updates are prohibited. For details regarding setting defaults in the Options window, see Chapter 11, "Customization."

NOTE

The **Save to Database** button replaces the **Save to Draft** button when working in online mode.

2 Users with **Update** authorization or higher can modify the job or Group scheduling table parameter fields, with the following exceptions

- When the Job Editing form is displayed, the **Table** and **Scheduling Table Library** (MVS only) fields cannot be modified. The job is already associated with the scheduling table (and Library) from which the Jobs List window was displayed.
- When the Group Editing form is displayed, the **Table** and **Group** fields cannot be modified. The **Group** parameter describes the Group scheduling table, itself, and the Group scheduling table is already associated with the scheduling table from which the Jobs List window was displayed. (The **Group** field is enabled, however, when you are creating a new Group scheduling table.)

3 Click **Save to Database**. The modifications to the job or Group scheduling table definition are saved to the CONTROL-M/Enterprise Manager database.

To create a new job in the scheduling table:

1 Click **New**.

A Job Editing form is displayed with the default values taken from the active skeleton.

NOTE

If the scheduling table is empty, you are asked whether you want to create a new scheduling group or a regular job definition.

NOTE

If the default values cannot be determined (that is, there is a mismatch between the current CONTROL-M name and the specified CONTROL-M name), an empty Job Editing form is displayed. In this case, depending on defaults set in the Confirmation panel of the Options window, a message may indicate that the Job Editing form is empty. For details regarding setting defaults in the Options window, see Chapter 11, "Customization."

2 Define the job parameters in the Job Editing form, and save.

To delete jobs from the scheduling table:

1 Select the job (or jobs) to be deleted (multiple jobs can be selected) and click **Delete**.

Depending on defaults set in the Confirmation panel of the Options window, you may be prompted to confirm the delete request. For details regarding setting defaults in the Options window, see Chapter 11, "Customization."

2 If a confirmation prompt is displayed, confirm the prompt.

The selected jobs are deleted.

NOTE

If you delete a Group entity, all jobs in the group are automatically deleted. This means that you are actually deleting all jobs in the table.

Uploading definitions to the CONTROL-M/Server database

Job processing definitions and their scheduling tables must be uploaded to the CONTROL-M / Server database at a data center so that they can be scheduled to run.

The upload copies the selected scheduling table(s) to the specified CONTROL-M / Server database. An upload is a background process, so you can perform other actions during transmission.

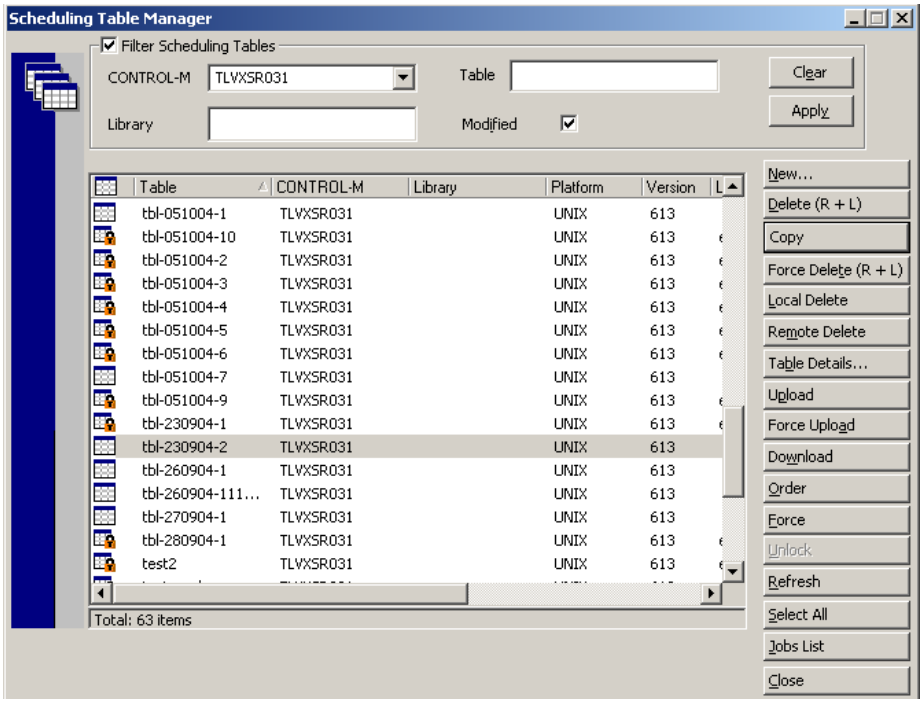
TIP

It is also possible to force an upload, for cases where a more recent version of the scheduling table exists in the CONTROL-M / Server database. For more information, see "Force Upload" on page 199.

To upload multiple scheduling tables:

1 Either select **Edit => Scheduling Tables => Scheduling Table Manager** or click  . The Scheduling Manager window is displayed.

Figure 66 Scheduling Table Manager Window



2 Hold down the **<Ctrl>** key and select the required scheduling tables.

3 Click **Upload** or **Force Upload**.

4 Click **Close**.

Working with calendars

A calendar contains a list of dates, usually spanning a number of months or years, that can be used to determine when a job can and cannot be scheduled. Specific days in a calendar can be designated as working days, accounting dates, holidays, and so on.

Any number of calendars can be defined, in your data center. Typically, each calendar is used to specify a different set of dates.

The dates on which a job can be ordered are limited by the calendars named in the scheduling parameters of the job processing definition (for example, Days or Calendar).

If no calendar is specified, the job is ordered only on the basis of other scheduling parameters (for example, Days, Months).

A new or modified calendar is saved in the CONTROL-M/EM database. Before a calendar can be referenced from a job processing definition, it must be uploaded to the CONTROL-M/Server database of the appropriate CONTROL-M installation. Uploading and downloading of calendars is discussed in “Table Synchronization” in the CONTROL-M/Enterprise Manager *User Guide*.

CONTROL-M uses three types of calendars, which are described in Table 68.

Table 68 Calendar types

Calendar type	Description
Regular	A regular calendar consists of a succession of dates, specifying when a job can or cannot be ordered. A job whose job processing definition points to a calendar in the Days Calendar and / or Week Days Calendar parameter is ordered based on the set of dates in that calendar. Other Scheduling parameters can be used in conjunction with a regular calendar to further control the dates on which the job is ordered.
Relative	[MVS] A relative calendar is one which is intended for use in conjunction with another calendar. A relative calendar is combined (using the CONTROL-M IOABLCAL utility) with a regular calendar or with another relative calendar to generate a new regular calendar. The new calendar that results from this process is a combination of the two calendars input to the utility. For more information regarding relative calendars and examples of how the IOABLCAL utility is used, refer to the *CONTROL-M for OS/390 and z/OS User Manual*.
Periodic	A periodic calendar can be used to divide the year into working periods (that is, 13 periods, 20 periods, and so on), instead of into twelve months. Each period can be the same or different in length. Periods do not have to be specified using consecutive dates, and they can overlap. A periodic calendar is used in conjunction with the Days or Week Days parameters to specify on which dates a job should be ordered. **Note:** Each period can be up to a maximum of 255 days in length.

A job processing definition that points to a calendar from the Days Calendar And / Or Week Days Calendar parameter is ordered based on the dates in that calendar. Other Scheduling parameters can be used with a calendar to further control the dates on which the job is ordered.

For examples of how calendars are used to schedule jobs, refer to the description of the Days Calendar parameter in *CONTROL-M Job Parameter and Variable Reference Guide*.

[MVS] For examples of how calendars are used to schedule jobs under MVS, refer to the job scheduling parameters chapter in the *CONTROL-M for OS/390 and z/OS User Manual*.

To see the effect of a calendar on a job's schedule plan, run the CTMRPLN utility. This utility produces a report that indicates when jobs in a selected scheduling table are scheduled to run. For more information about the CTMRPLN utility, see the Utilities references in the *CONTROL-M/Server Administrator Guide* and the *CONTROL-M for OS/390 and z/OS User Manual*.

Managing calendars

Calendars are listed in the Calendars Manager window. In this window, you can:

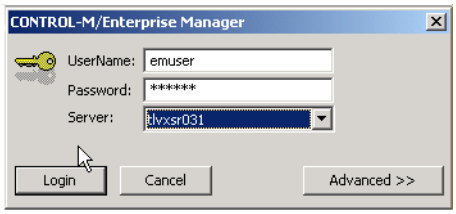
- Delete existing calendars.
- Request to define new calendars, or edit existing calendars.
- Request to copy existing calendars.
- Upload calendars from the CONTROL-M/EM database to the CONTROL-M/Server database.
- Download calendars from the CONTROL-M/Server database to the CONTROL-M/EM database.

Opening the Calendars Manager window

Use the following steps to open the Calendars Manager window.

To open the Calendars Manager window:

1 Click . or choose **Edit => Calendar Manager**. The CONTROL-M/Enterprise Manager Login dialog box is displayed.



2 Enter your user name and password and the name of the server to which you are connecting.

3 Click **Login**. The Calendars Manager window is displayed.

NOTE

When you close the Calendars Manager window, the connection with CONTROL-M/EM is broken. You optionally establish a connection that is closed only when you specify, use the Connect feature described in "Moving from definition to production: an overview."

Fields of the Calendars Manager window

The columns in the Calendars Manager window are described in Table 69, and can be clicked to sort the calendars in the window.

Buttons on the right side of this window offer a wide variety of actions that can be performed on calendars selected in this window. These buttons are described in Table 70 on page 217.

Figure 67 Calendars Manager window

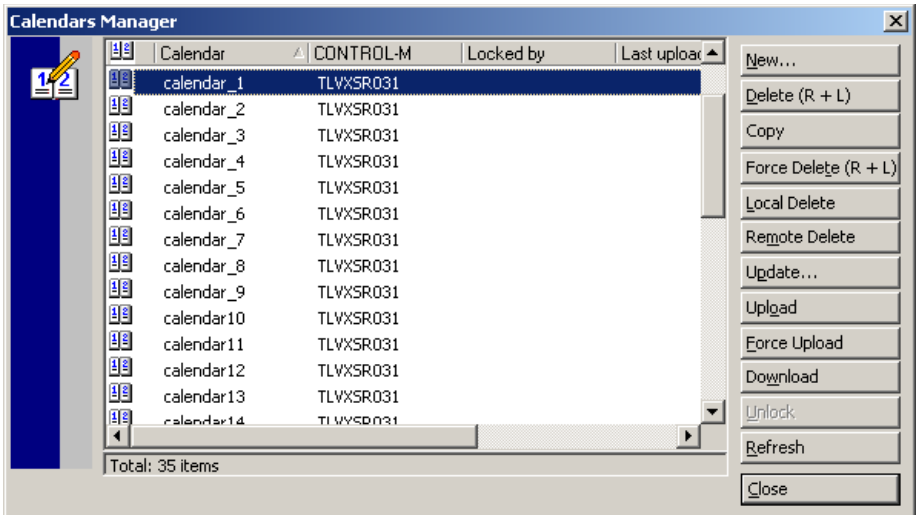


Table 69 Calendars Manager window columns

Column	Description
CONTROL-M	Name of the CONTROL-M installation to which the calendar belongs.
Calendar	User-defined name of the calendar (maximum of 10 characters). This is the name by which the calendar is specified in the job processing definition.
Locked by	Name of the CONTROL-M/EM user currently modifying the calendar. A calendar can be modified by only one user at a time.
Last Upload	Date and time of last upload or download of the calendar between CONTROL-M/EM and the CONTROL-M/Server database in the specified installation.
Modified	Yes indicates that the calendar has been modified on the CONTROL-M/EM workstation but not yet uploaded to the CONTROL-M.
Type	Type of calendar. **Relative, Regular,** or **Periodic**.

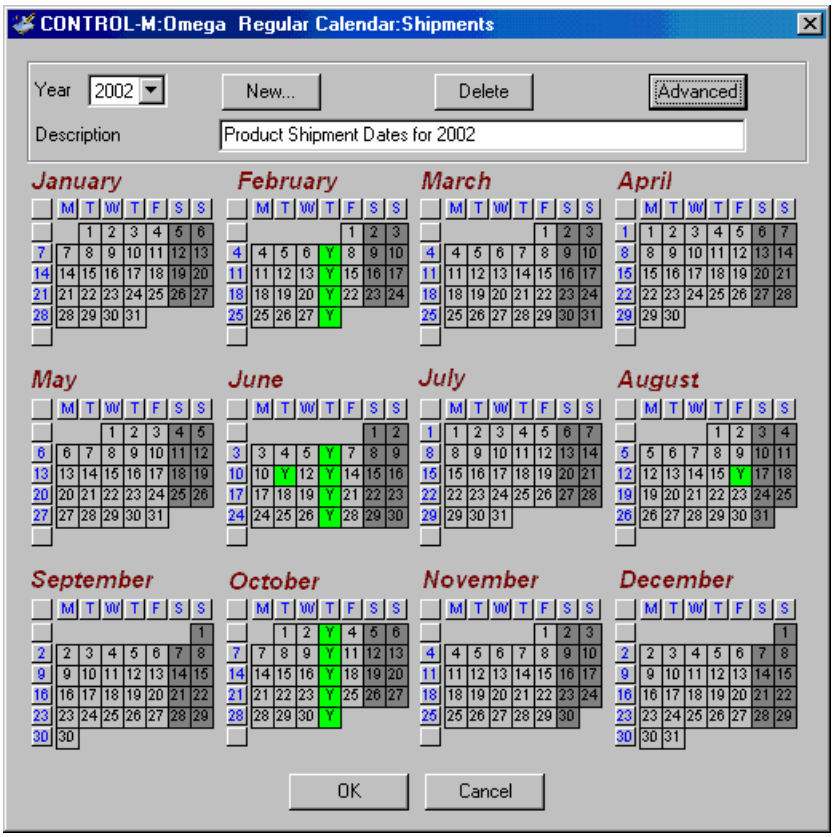
Table 70 Calendars Manager window – Command buttons

Button	Description
New	Opens the Calendar Definition window to define a new calendar. For more information, see "Defining and modifying calendars" on page 218.
Delete	Deletes the selected Calendar from the CONTROL-M/EM and CONTROL-M/Server databases.
Copy	Opens the Copy Calendar dialog box to enable copying of the selected calendar.
Force Delete	Delete the Calendar from both the CONTROL-M/EM and CONTROL-M/Server databases, regardless of whether a later version of the Calendar exists in the CONTROL-M/Server database.
Local Delete	Deletes the Calendar from the CONTROL-M/EM database.
Remote Delete	Deletes the Calendar from the CONTROL-M/Server database. **Note**: To delete a Calendar in the CONTROL-M/Server database that was modified more recently than the one in the CONTROL-M/EM database use the **Force Delete** option. For additional information, see the description of table synchronization in the *CONTROL-M/Enterprise Manager User Guide*.
Update	Opens the Calendar Definition window to update the selected calendar. For more information, see "Defining and modifying calendars" on page 218.
Upload	Copies the selected calendar to the indicated CONTROL-M/Server database. The upload takes place as a background process, allowing the user to perform other actions during transmission. Upon completion, the Modified field changes to No. If the calendar in the CONTROL-M/Server database is a later version, a message appears indicating that the Upload is not allowed. This restriction can be overridden using the Force Upload option (described below).
Force Upload	Copies the selected calendar to the indicated CONTROL-M/Server database, regardless of whether or not a later version of the calendar exists in the CONTROL-M/Server database. The upload takes place as a background process, allowing the user to perform other actions during transmission. Upon completion, the Modified field changes to No.
Download	Copies the selected calendar from the CONTROL-M/Server database to the CONTROL-M/EM database. The download takes place as a background process, allowing the user to perform other actions during transmission. Upon completion, the Modified field changes to No. To download a calendar that does not appear in the Calendar Manager window (and therefore cannot be selected), first create the calendar (using the Calendar Definition window) and then download the calendar normally.
Unlock	Unlocks the selected calendar to allow modification by a different user.
Refresh	Refresh the status of calendars in the window.

Defining and modifying calendars

The Calendar Definition window enables the user to define new calendars and edit existing calendars. This window is displayed by clicking either **New** or **Update** in the Calendars Manager window.

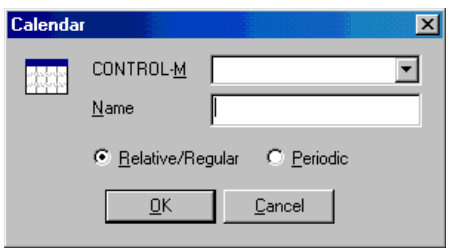
Figure 68 Calendar Definition window



To define a new calendar:

1 Click **New** in the Calendars Manager window. The Calendar dialog box is displayed:

Figure 69 Calendar dialog box



2 Specify the CONTROL-M and a name for the new calendar. Indicate whether the calendar is **Relative/Regular** or **Periodic**. Click **OK**. The new calendar is created in the CONTROL-M/EM database and the Calendar Definition window is displayed (see Figure 68 on page 218).

3 Define the calendar criteria as described in "Defining calendar criteria" on page 221.

4 When you have finished selecting dates in the new calendar, click OK to close the Calendar Definition window.

To modify an existing calendar:

1 Select a calendar in the Calendars Manager window.

2 Click **Update**. The Calendar Definition window is displayed for the selected calendar.

3 Modify the calendar criteria as described in "Defining calendar criteria" on page 221.

4 Click **OK**. Changes are saved to the CONTROL-M/EM database.

NOTE

The Calendar Definition window saves calendars only to the CONTROL-M/EM database. For CONTROL-M to use a calendar, it must be uploaded to a CONTROL-M/Server database (for example, using the **Upload** button in the Calendars Manager window).

Copying calendars

You can copy an existing calendar to the same or a different CONTROL-M.

To copy an existing calendar:

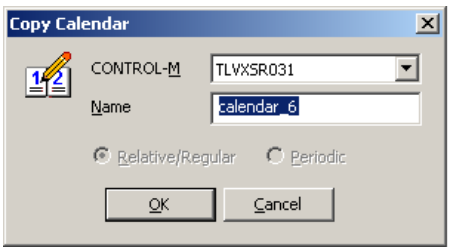
1 In the Calendars Manager window, select the calendar to be copied, and click **Copy** (or **Ctrl+C**).

The **Copy Calendar** dialog box displays details of the selected calendar.

NOTE

Depending on defaults set in the Confirmations panel of the Options dialog box, a confirmation prompt may be issued before the Copy Calendar dialog box is displayed. For information on the Options dialog box, see Chapter 11, "Customization."

Figure 70 Copy Calendar dialog box



2 Specify a new calendar name in the **Name** field (for the target calendar).

3 If wanted, specify a different CONTROL-M.

4 Click **OK**. The changes are saved in the CONTROL-M/EM database.

NOTE

When copying a calendar, note the following:

- You must be authorized to copy calendars (or the window fields are unavailable).
- Only one calendar may be selected, and it must be unlocked at the time of the copy.
- The new calendar name you specify must be unique to the particular CONTROL-M.
- If you specify a different target CONTROL-M, it must be the same platform and version as the calendar source CONTROL-M.

Defining calendar criteria

Calendar criteria can be defined in a variety of different ways. The following paragraphs describe the different types of calendar criteria and how they can be specified in the Calendar Definition window (Figure 68 on page 218).

General calendar criteria

To add a description to a calendar:

A free text description can be saved for each calendar. This definition is specified in text box (labeled **Description**) in the upper portion of the calender definition window. The text is saved when you click **OK**.

To select years for a calendar:

Each calendar can span one or more years. To edit an existing year in the calendar, select the year from the list in the upper left of the Calendar Definition window. If a calendar for the required year has not been defined, click **New...** and specify the year.

B

NOTE

When defining a calendar, each time you attempt to change the year (either to modify a different year or create a new year), CONTROL-M / Desktop prompts you to confirm if you want to save the changes made to the current year.

Criteria for regular or relative calendars

In regular calendars dates on which the job can be ordered, are marked by a Y. In a relative calendar, they are marked by Y, + or -. Dates that contain the actual date (a number) indicate dates on which the job cannot be ordered. This is equivalent to the value N for that date. For more information about symbols and colors in the calendar, see “Dates and colors” on page 224.

To mark a date in the calendar:

1 Click the date and type **Y**, **+** or **-**. The selected mark and an appropriate color appear in place of the date and the cursor is advanced to the next date.

-or-

Right-click the date and select an option from the popup menu (**N**, **Y**, **+**, **-**). The selected mark and color appear in place of the date and the cursor is advanced to the next date.

2 To unmark a date, click the selected date again and change the mark to **N**. The actual date is then displayed.

To select all weekdays in a month:

Click the column heading for the appropriate day. For example, click **M** to select all Mondays in the month.

To select an entire week in a month:

Click the button to the left of a calendar week to select the entire week.

NOTE

The number in the week button indicates the date of the first day in that week.

To select an entire month:

Click the top left button of the month.

Criteria for periodic calendars

Dates in a periodic calendar are marked by a periodic identifier. These identifiers can be any character except Y, N, +, or -.

To specify a periodic identifier

1 Click a date and type a periodic identifier (any character except Y, N, + and -).

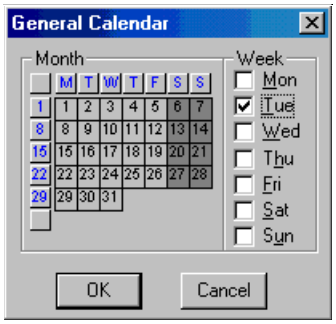
A To unmark a date, click the selected date again and either right-click or press the <Del> key to remove the identifier.

NOTE

Each period can be up to a maximum of 255 days in length.

To apply general calendar criteria to every month in a year:

1 Click **Advanced**. The General Calendar definition window opens.



2 Select the date(s) in the Month or select the day(s) of the Week.

3 Click **OK**. All the selected dates are highlighted each month in the Calendar Definition window.

4 Type the wanted mark (Y, + or -) or periodic identifier or right-click to open and select an option from the pop-up menu (N, Y, +, or -). The selected mark and color appear in place of the dates.

Dates and colors

The characters and colors displayed in regular, relative and periodic calendars indicate how a job should be handled on each date. The meaning of each character and color is as follows:

Table 71 Dates and colors

Mark	Color	Type	Description
Date (N)		Regular, Relative or Periodic	The job cannot be ordered on this date.
Y	Green	Regular or Relative	The job can be ordered on this date.
–	Pink	Relative	**For MVS jobs only.** When matched against a Y in the associated calendar by the IOABLCAL utility, causes the generated calendar to have a Y in the corresponding date. When not matched against a Y, causes the generated calendar to have a Y on the nearest prior working date.
+	Yellow	Relative	**For MVS jobs only.** When matched against a Y in the associated calendar by the IOABLCAL utility, causes the generated calendar to have a Y in the corresponding date. When not matched against a Y, causes the generated calendar to have a Y on the nearest following working date.
*****	different color for each period	Periodic	Dates are marked with unique period identifiers. Identifiers can be any character except Y, N, + and -. Each identifier has its own unique color. **Note:** Each period can be up to a maximum of 255 days in length.

Chapter 9

Defining and scheduling jobs with the CONTROL-M Job Definition Wizard

The CONTROL-M Job Definition Wizard is the easy way to create, modify, and schedule CONTROL-M job processing definitions.

NOTE

The wizard cannot be run in conjunction with the online load mode. For more information, see "A comparison of online and local load modes" on page 21.

To run the Job Definition Wizard, you will need:

- A CONTROL-M/EM user account and valid password
- A running CONTROL-M/EM GUI Server
- Definitions in CONTROL-M/Desktop for each of your CONTROL-M installations
- A running gateway between CONTROL-M/EM and your CONTROL-M installation

The Job Definition Wizard is intended for new users. It enables you to define and run jobs while becoming familiar with the key elements of CONTROL-M.

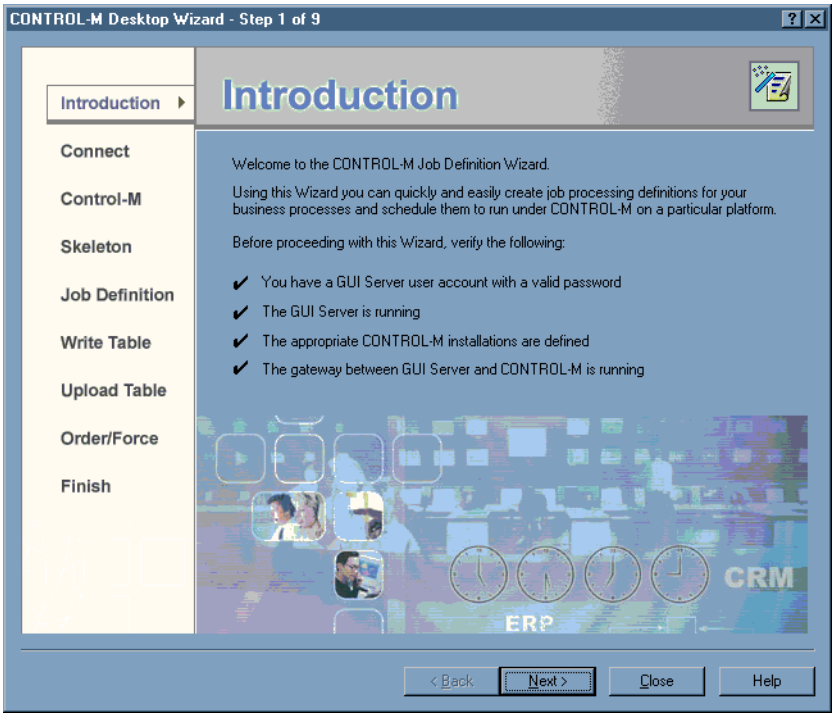
Starting the CONTROL-M/Desktop Wizard

1 Click in the CONTROL-M/EM Desktop tool bar and the Introduction window is displayed.

TIP

If the toolbar is not displayed, press **Ctrl-w** to display the Toolbar menu.

Step 1: Introduction window



The Introduction window (Step 1) describes the Job Definition Wizard functions and prerequisites. The left side lists all the windows of this wizard. The window you are in is highlighted.

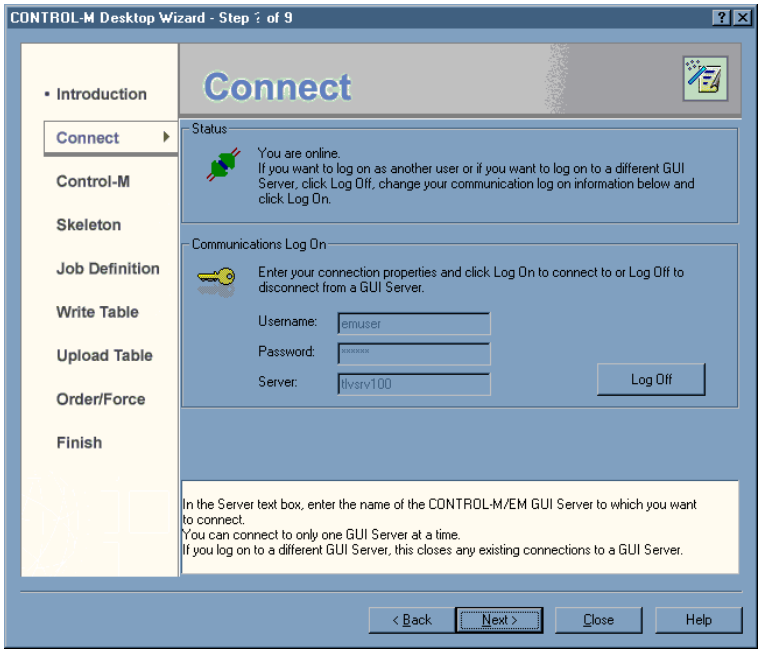
TIP

The **Finish** button completes the job definition and opens the CONTROL-M/EM GUI.

The **Close** button closes the Job Definition Wizard. All data is retained in the database. You can return to the Job Definition Wizard and continue the job definition.

Ensure that the prerequisites have been met and click **Next** to continue.

Step 2: Connect window



If you are offline or want to connect to a different CONTROL-M/EM GUI Server, enter the data in this window.

The CONTROL-M/EM GUI Server is the "heart" of CONTROL-M/EM. This component controls communication between the various CONTROL-M components and the CONTROL-M/Server database. The CONTROL-M/EM GUI Server also maintains a database, in which all job scheduling information is stored before being inserted in to the CONTROL-M Active Jobs file.

1 Specify the following information:

- **Username** – Your CONTROL-M/EM username
- **Password** – Your CONTROL-M/EM password
- **Server** – Host name of the computer that is running the CONTROL-M/EM GUI Server to which you will connect.

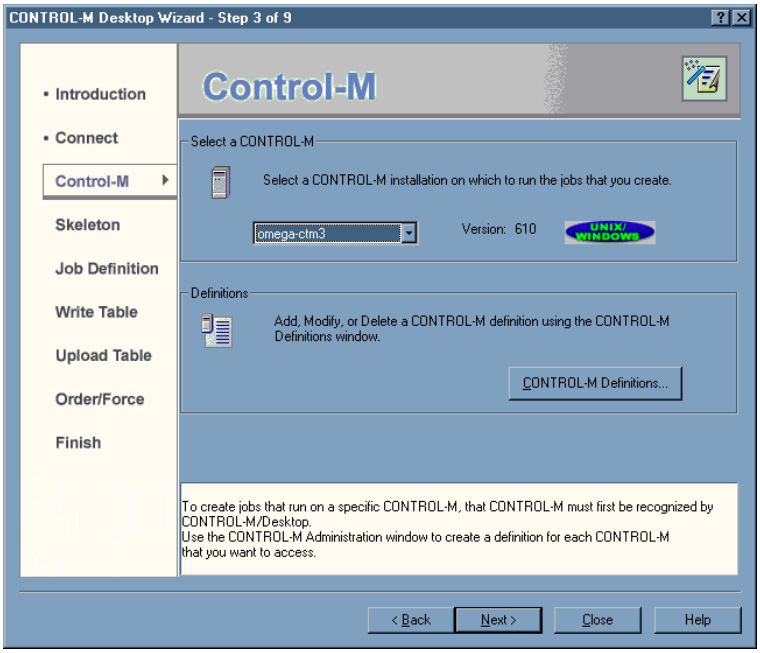
NOTE

You can connect to only one CONTROL-M/EM GUI server at a time.

If you are logged on to a CONTROL-M/EM GUI server and you choose to change servers, the first server is automatically disconnected.

2 Click **Next** to continue.

Step 3: CONTROL-M window



In this window you select the CONTROL-M installation on which to run your jobs.

1 Select the CONTROL-M installation from the list.

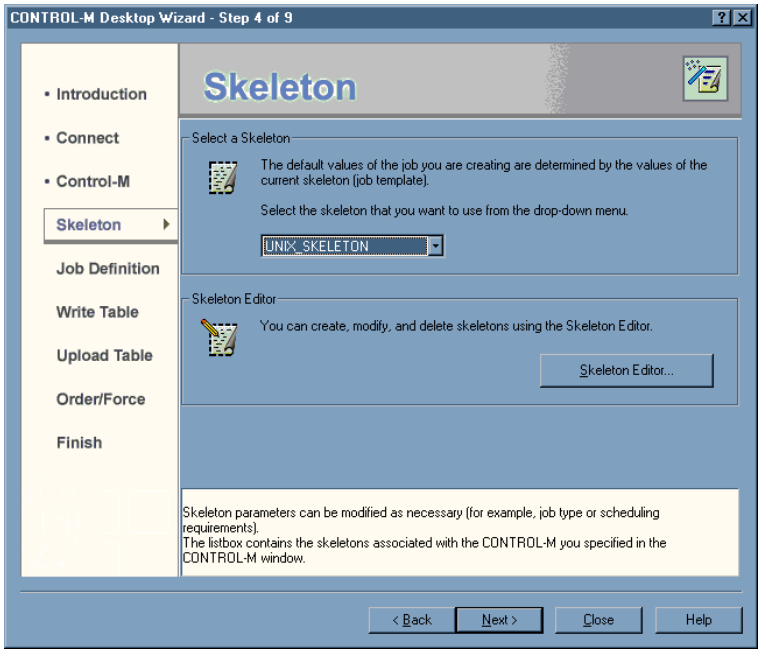
The list includes all CONTROL-M configurations that have been defined in CONTROL-M / Desktop.

2 If you want to add, modify, or delete a CONTROL-M definition, click the CONTROL-M **Definitions** button.

For more information on defining a CONTROL-M in CONTROL-M / Desktop, see Chapter 10, “CONTROL-M definitions and validity checks.”

3 Click **Next** to continue.

Step 4: Skeleton window



In this window, you select the skeleton (job template). The skeleton determines the default values of the job.

Job skeletons are job parameter templates that are used as the basis from which job processing definitions are created.

1 Select the skeleton from the drop-down list.

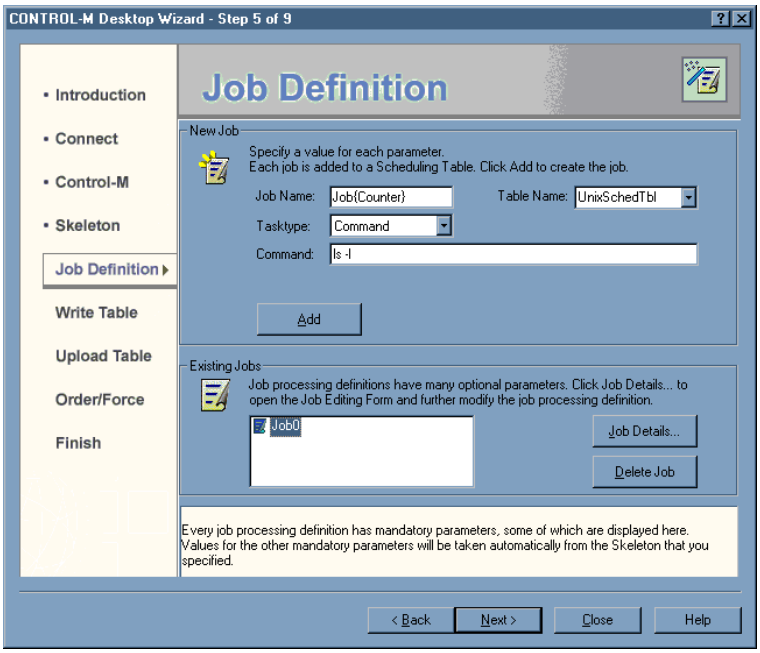
2 If you want to add, modify, or delete a skeleton definition, click on the **Skeleton Editor** button.

The Skeleton Editor form is displayed. For more information about job skeletons, see Chapter 4, “Creating and updating multiple jobs.”

Any changes to an existing skeleton are permanent and will affect the present job. The changes are not retroactive.

3 Click **Next** to continue.

Step 5: Job Definition window



The Job Definition window (Step 5) enables specification of the minimum mandatory parameters for your job. Each job is added to a specified scheduling table. For more information on scheduling tables, see Chapter 7, “Managing scheduling tables.”

1 Specify the following information in the **New Job** section (all task types require the following parameters:

- **Job Name** – Specify a job name or use Job(Counter). If you use Job(Counter), the job names will be Job0. Job1, Job2 ...
- **Tasktype** – Of the job (task) to be performed by CONTROL-M.
- **Table Name** – Name of the Scheduling table to which the job belongs. Together with parameter CONTROL-M, this determines the position of the job in the CONTROL-M / Scheduling Table hierarchy.

NOTE

The displayed parameters change with the selected Task Type. For a complete description of parameters see the *CONTROL-M Job Parameter and Variable Reference Guide*.

For Unix, Microsoft Windows, iSeries (AS/400), and OpenVMS, the task types and required parameters are:

Table 72 Task Types for Unix, Microsoft Windows, iSeries (AS/400), and OpenVMS

Task Type	Description and parameters
Command	The only parameter is **Command**.
Job	Normal job. Displayed parameters are: ■ File ■ Path
Detached	The job does not run but does its preprocessing and post processing. Used to check job flow. Displayed parameters are: ■ File ■ Path
Dummy	A normal job that submits the file specified in File Name to the operating system.

Table 73 Task Types for MVS

Task Type	Description and parameters
Job	Normal job. Displayed parameters are: ■ Mem Name ■ Mem Lib ■ Table Lib
Started Task	Started task. Displayed parameters are: ■ Mem Name ■ Mem Lib ■ Table Library

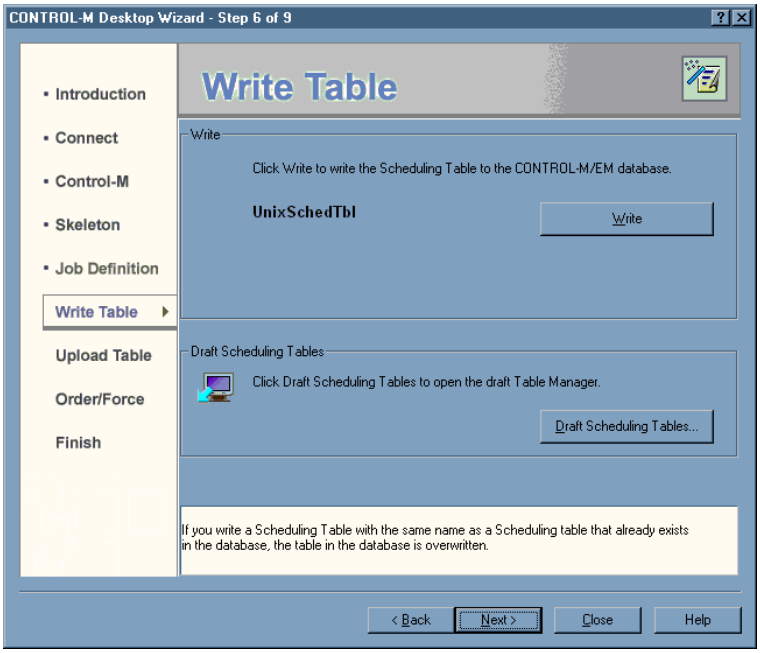
2 Click **Add** to add the job to the Scheduling table.

You can continue to define jobs. If you define jobs with different Table Names, the Upload Table window will display the Table Name of the last defined job.

3 In the **Existing Jobs** field, if you want to add, modify, or delete a job processing definition on the specified Scheduling Table, select the job name and click **Job Details**. The Job Editing form is displayed. For more information, see Chapter 3, "Working with the Job Editing form."

4 Click **Next** to continue.

Step 6: Write Table window



Write Table (Step 6) writes the scheduling table (with the new job) to the CONTROL-M/EM database. This is the last table specified in "Step 5: Job Definition window" on page 230.

1 Click **Write** to write the scheduling table to the CONTROL-M/EM database.

TIP

If this scheduling table has the same name as an existing table, you will be prompted to confirm the Write operation and the existing table will be overwritten.

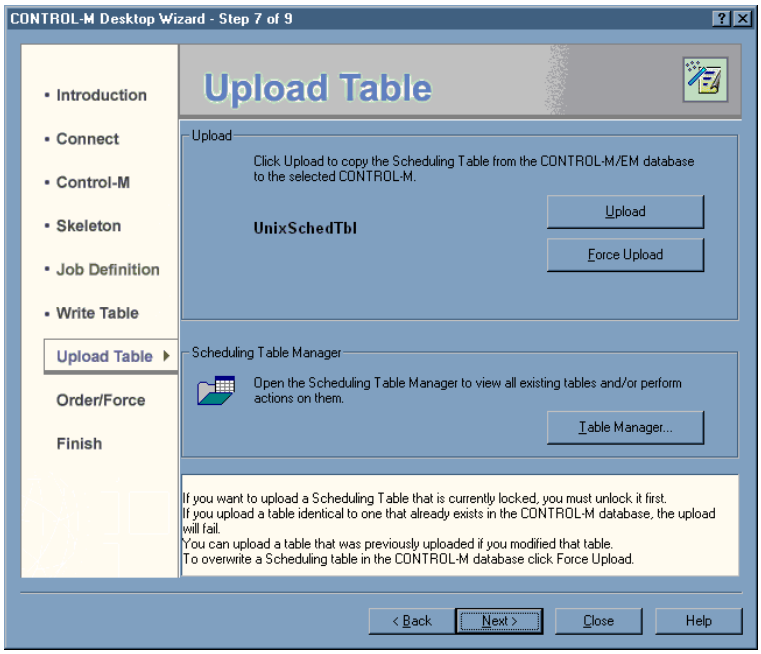
Depending on the setting of the **Resolve job's Author field conflict** field in the General panel of the Options dialog box, you may be prompted for confirmation if there are conflicts between the Author fields of the newly edited job definitions in the Scheduling table and the currently logged in user in the CONTROL-M/EM database. For more information, see the Security chapter in the *CONTROL-M/Enterprise Manager Administrator Guide*, and the description of the General panel of the Options dialog box in Chapter 11, "Customization."

2 To see all scheduling tables that can be written to the CONTROL-M/EM database, click the **Draft Scheduling Tables** button. For more information, see Chapter 7, "Managing scheduling tables."

If you have defined more than one Scheduling table and want to select which table to write or want to write more than one table at one time, you will have to open the Draft Table Manager to write these tables to the CONTROL-M/EM database. For more information, see Chapter 7, "Managing scheduling tables."

3 Click **Next** to continue.

Step 7: Upload Table window



The Upload Table window (Step 7) copies the Scheduling table uploaded to the CONTROL-M/EM database in "Step 6: Write Table window" on page 232, to the CONTROL-M/Server database for that table.

1 Click **Upload** to copy the Scheduling table from the CONTROL-M/EM database to the CONTROL-M/Server database on the specified computer.

NOTE

Uploading a table with same name as an existing table will fail unless the table that you are uploading has been modified to have content different from that of the table already in the database.

2 If the table cannot be uploaded, you can click **Force Upload** to upload the Scheduling table.

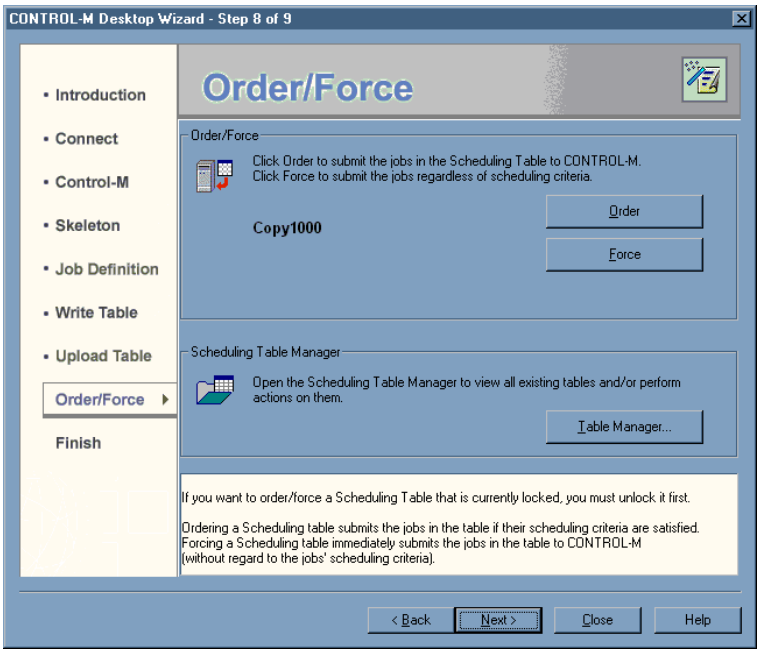
3 Click **Table Manager** in the **Scheduling Table Manager** field if you want to perform various Scheduling table operations, including the following:

- Check an existing Scheduling table
- Modify an existing Scheduling table
- Upload more than one Scheduling table
- Delete an existing Scheduling table

For more information, see Chapter 7, "Managing scheduling tables."

4 Click **Next** to continue.

Step 8: Order/Force window



The Order / Force window (Step 8) submits your job in the scheduling table to CONTROL-M.

1 Click **Order** to submit the job.

NOTE

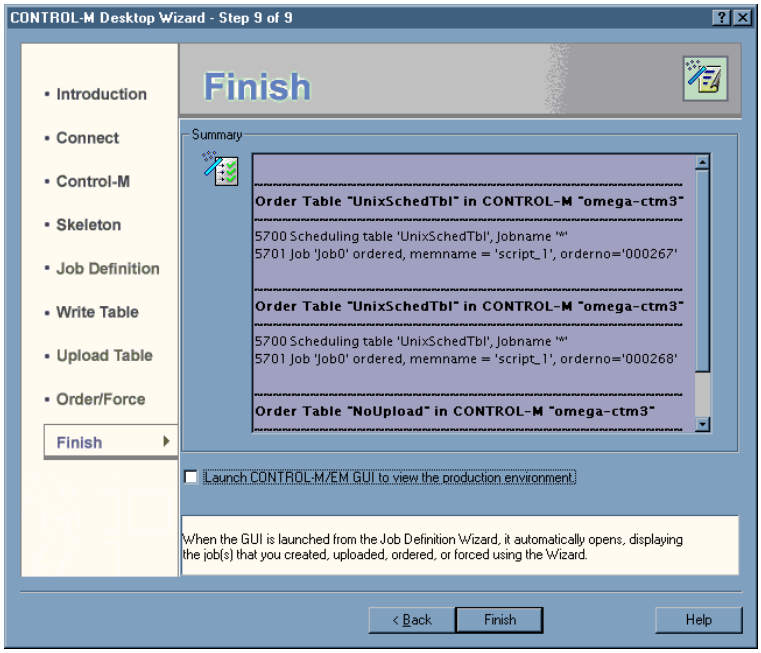
If the job data does not fall within existing scheduling parameters, the order will fail.

2 Clicking **Force** will submit the job regardless of its scheduling criteria.

3 If you want to check or modify existing tables, click **Table Manager** in the **Scheduling Table Manager** field. For more information, see Chapter 7, "Managing scheduling tables."

4 Click **Next** to continue.

Step 9: Finish window



The Finish window (Step 9) completes the job processing definition. A summary is displayed in the **Summary** window.

1 To launch the CONTROL-M/EM GUI upon completion of the process, click the **Launch CONTROL-M/EM GUI to view the production environment** check box.

2 Click **Finish**.

The CONTROL-M Job Definition Wizard closes and the CONTROL-M/EM GUI is displayed with the **All Jobs** default ViewPoint loaded.

3 If you click **Close**, the CONTROL-M Job Definition Wizard closes without starting up CONTROL-M/EM.

Chapter 10

CONTROL-M definitions and validity checks

The following topics are described in this chapter:

CONTROL-M definitions

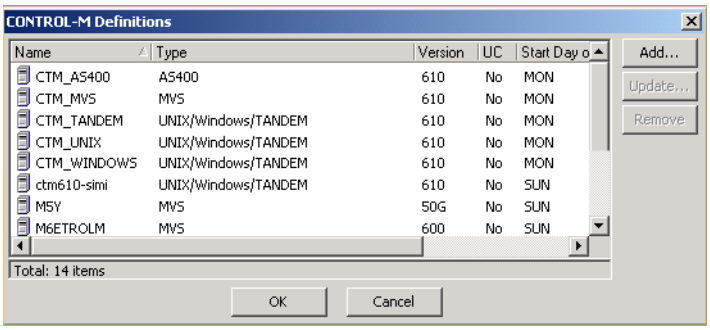
CONTROL-M / Desktop identifies each job processing definition being edited or created with a specific CONTROL-M installation. The definition of the related CONTROL-M installation determines the format of the Job Editing form to be displayed and the required validity checks to be performed for the job processing definition.

CONTROL-M installations are defined to CONTROL-M / Desktop using the CONTROL-M window. Each CONTROL-M represents a single CONTROL-M on a specific platform.

When a scheduling table is downloaded, CONTROL-M / Desktop checks for the appropriate CONTROL-M name and associated platform in the existing CONTROL-M definitions. If no appropriate definition exists, a new one is created for this CONTROL-M installation. Additional fields describing the CONTROL-M installation may need to be updated in the CONTROL-M window.

To define a CONTROL-M to CONTROL-M/Desktop:

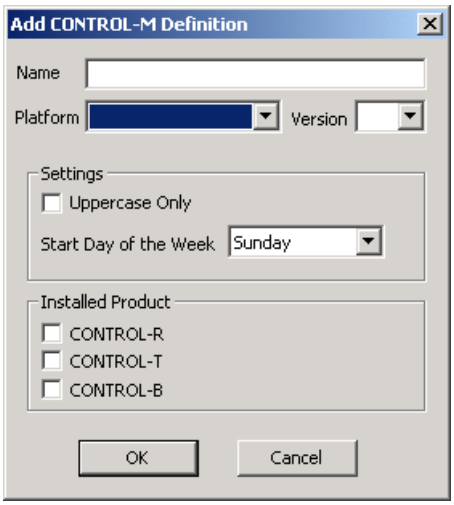
1 Select **Edit => CONTROL-M Definitions** from the menu bar.



NOTE

Click a column heading to sort the window by that column.

2 Click **Add**. The Add CONTROL-M Definition dialog box is displayed:



3 Fill in the fields of this dialog box as indicated in Table 74.

Table 74 Fields in the CONTROL-M dialog box

Field	Description
Name	Enter the name of the CONTROL-M. This name is used by CONTROL-M / Desktop only. It appears in the list for the CONTROL-M field in the Job Editing form. It is a required field for the Validity Checks function (described in "Validity checking" on page 240).
Platform	Select the type of platform, such as OS / 390, z / OS, UNIX / Windows / TANDEM, or iSeries (AS / 400).
Version	Version number of the CONTROL-M at the specified installation. iSeries (AS / 400): When defining an iSeries (AS / 400) data center, select **224** (or **225**, if available).
Uppercase Only	Indicates if all parameters in the Job Editing form for this CONTROL-M must be in uppercase. For most installations this option should not be selected.
Start Day of the Week	Indicates the first day of the week for use in the Week Days field in the Job Editing form. **Note:** The day selected in this field is used to ensure that the display of calendars for this CONTROL-M are properly adjusted. However, this value is not passed back to the CONTROL-M installation. Use the ctmsys utility, to ensure that the start day of the week for the CONTROL-M installation is the same as the value specified in this field.
Installed Products	For MVS platforms only: Indicate which other CONTROL-M products are installed with CONTROL-M for OS / 390 and z / OS: (CONTROL-M / Restart, CONTROL-M / Analyzer, or CONTROL-M / Tape).

4 Click **OK** to add the CONTROL-M to CONTROL-M / Desktop.

5 Click **OK** to save the changes and close the window.

To modify an existing CONTROL-M definition:

1 Select **Edit => CONTROL-M Definitions** from the menu bar.

2 Select the CONTROL-M definition to be updated and click **Update**.

3 Modify the fields in the CONTROL-M window and click **OK**.

To delete a CONTROL-M from CONTROL-M/Desktop:

1 Select the CONTROL-M and click **Remove**. A confirmation window is displayed.

2 Indicate whether you want to Remove all jobs from this CONTROL-M in the current draft and click **OK**.

Validity checking

One of the advantages of CONTROL-M/Desktop is that it can work with job processing definitions independently of CONTROL-M. This allows you to create and update job processing parameters without having to undergo validity checks that occur in CONTROL-M/Enterprise Manager (CONTROL-M/EM). This means that you can work much faster, especially when creating multiple jobs using the Mass Create facility (described in Chapter 4, "Creating and updating multiple jobs").

NOTE

This does not mean that job processing definitions should not be checked for validity before they are used in the production environment.
After job processing definitions are created or updated, they should be checked before they are written to the CONTROL-M/EM database.

This section describes a CONTROL-M/Desktop facility that is used for checking validity of new and updated job processing definitions.

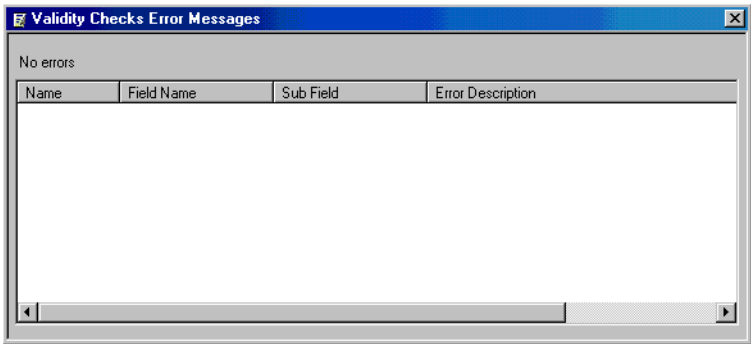
To check the validity of all jobs in a draft:

1 Open the draft.

2 Choose **Tools => Validity Checks** or click  .

CONTROL-M/Desktop checks all parameters in all job processing definitions in the draft and displays the errors in a messages window.

Figure 71 Validity Checks Error Messages window



To correct the errors found during a validity check:

Use either of the following methods to correct errors found during a validity check:

- Double-click the Job Name in the Messages window to open the Job Editing form for the job. Make the necessary corrections and then click OK to save the changes to the job definition.
- Choose **Tools => Mass Update** or click  .

  These actions start the Mass Update facility, and can be used to correct common errors in multiple jobs in the draft. For more information, see Chapter 4, "Creating and updating multiple jobs."

Checking validity by default

CONTROL-M/Desktop can optionally validate all parameter values in the Job Editing form when each time it is used to open or create a job processing definition.

This option is set by checking the **Always check the validity of jobs** option in the General panel of the Options dialog box (**Tools=>Options**). For more information about this option, see Chapter 11, "Customization."

NOTE

This option should not be set when using the Mass Create or Mass Update facility.

Chapter 11

Customization

This chapter describes the various way in which CONTROL-M/Desktop can be customized for your site. This information includes:

- Setting feature defaults in the Options dialog box
- Modifying the display of CONTROL-M/Desktop toolbars

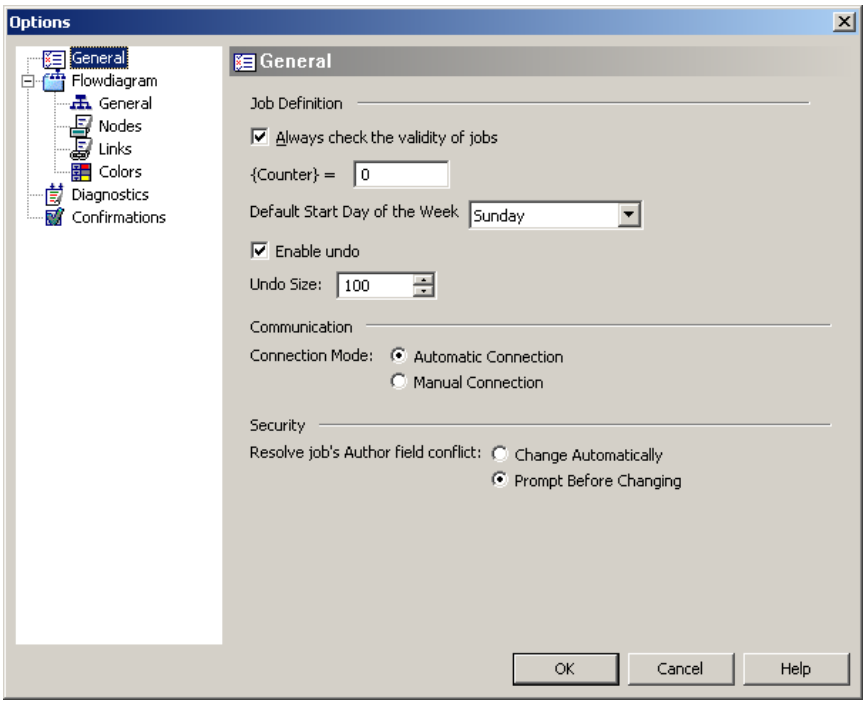
Setting feature defaults using the Options dialog box

Several features in CONTROL-M/Desktop can be customized to suit site requirements and preferences. This customization is generally performed from the Options dialog box, which is displayed by selecting the **Tools => Options** menu option.

This dialog box consists of two panes that are used to display any of several panels, each contain default settings pertaining to a particular feature. The left pane displays a tree that lists available panels, from which you can select a panel for display; the right pane displays the current panel.

Figure 72 shows the Options dialog box as it appears when first opened.

Figure 72 Options dialog box



To display the appropriate panel to modify particular CONTROL-M/Desktop default settings, you must first select the appropriate tree branch. Table 75 describes the features whose default settings can be accessed from each tree branch.

NOTE

Some branches have sub-branches, each of which displays a different panel.

Table 75 Default settings accessed by branches in the tree

Branch	Description
General	General defaults for the CONTROL-M/Desktop environment.
Flowdiagram	Default features for Flow Diagram view. This branch has sub-branches.
Diagnostics	Troubleshooting settings for tracking technical problems with CONTROL-M/Desktop. Use this panel only when instructed by BMC Software Customer Support.
Confirmations	Confirmation requests and warnings to display for various job, table and calendar actions.

To modify any default setting

1 Open the Options dialog box by selecting **Tools => Options** in the menu.

2 Click the appropriate branch to display its panel of default settings.

3 Change defaults as wanted, and click **OK**.

Available branches and corresponding panels

The rest of this section describes the features that can be modified, by branch and corresponding panel.

General panel

The General panel (Figure 73) contains several general settings for the CONTROL-M / Desktop environment. These settings are described in Table 76.

Figure 73 General panel

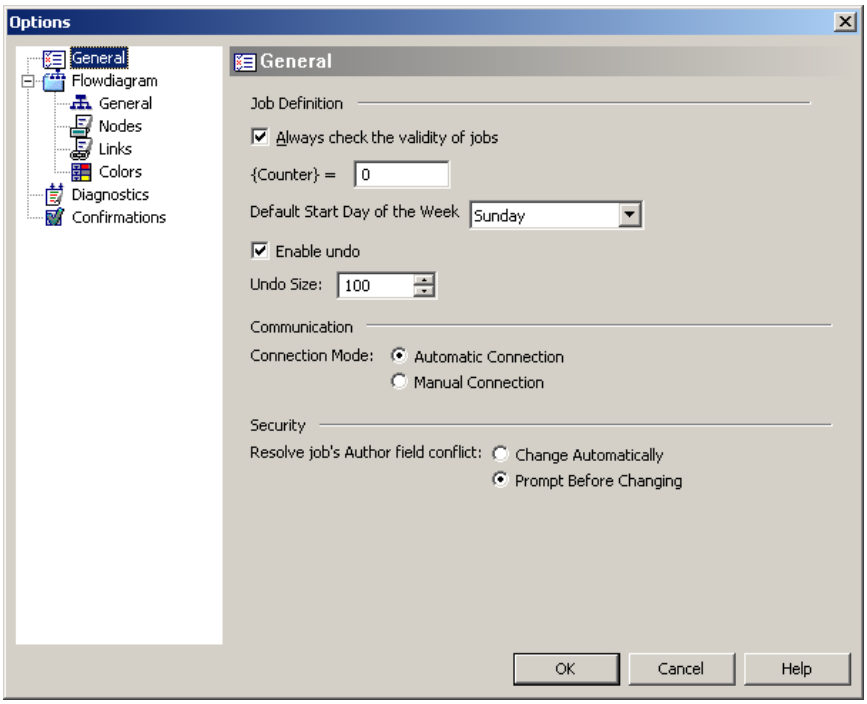


Table 76 General panel (Part 1 of 2)

Area	Field	Description
Job Definition		General settings that apply to job processing definitions.
	Always check the validity of jobs	Check this box to indicate that CONTROL-M/Desktop should automatically check the validity of parameter values as they are entered in the Job Editing form. Validity checks can also be performed on all jobs in a draft using the **Tools => Validity Checks** option. For more information, see "Validity checking" on page 240.
	{Counter}	The current value of the {Counter} variable used by the Mass Job Create and Mass Job Update facility. For more information, see "Job skeletons" on page 148 and "Updating multiple jobs and group scheduling tables" on page 158.
	Default Start Day of the Week	Indicates the first day of the week for use in the Week Days field in the Job Editing form. This is the default value used for all data centers. A Start Day of the Week can also be specified for each CONTROL-M using the CONTROL-M Definition window. The value in the CONTROL-M definition window overrides the default value specified in the Options dialog box.
	Enable Undo / Undo Size	Check this box to enable actions performed in the Job Editing form to be undone or redone. If checked, select the number of levels of Undo/Redo that can be performed, in the **Undo Size** field. Default: **100**. For more information, see "Undo and Redo in the Job Editing form" on page 100.
Communication		
	Connection Mode	Determines how CONTROL-M/Desktop should connect to CONTROL-M/EM. Select either of the following: ■ **Automatic Connection**. CONTROL-M/Desktop opens and closes the connection as communication as necessary depending on selected actions. ■ **Manual Connection**. CONTROL-M/Desktop maintains an open connection with the CONTROL-M/EM GUI Server until the user closes the connection. For more information, see "Moving from definition to production: an overview" on page 23.

Table 76 General panel (Part 2 of 2)

Area	Field	Description
Security		
	Resolve job's Author field conflict	Determines how to handle situations where the user performing a Write to CONTROL-M/EM does not match the name of the Author. Select either of the following: ■ **Change Automatically** — check this value if the author should automatically be reset without prompting the user for confirmation. ■ **Prompt Before Changing** — check this value to have CONTROL-M/EM prompt the user for confirmation before changing authorship. Default. For more information, see the Security chapter in the *CONTROL-M/Enterprise Manager Administrator Guide*.

Flowdiagram – General panel

The Flowdiagram General panel (Figure 74) contains general settings for the CONTROL-M Flow Diagram view. These settings are described in Table 77. For more information about the Flow Diagram, see "Understanding the Work Area, its views, and components" on page 48.

Figure 74 Flowdiagram – General panel

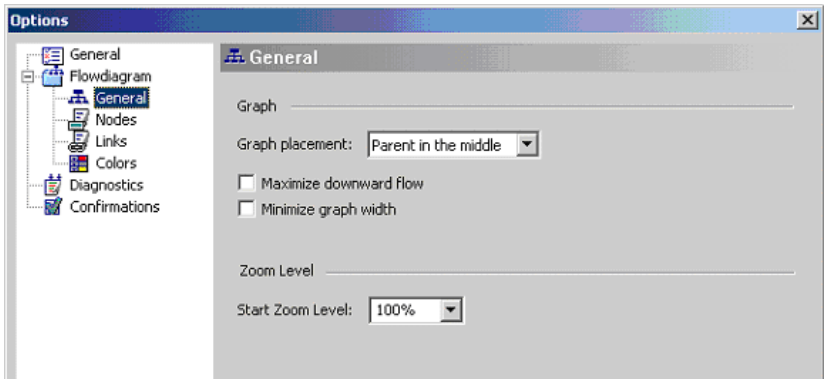


Table 77 Flowdiagram – General panel

Area	Field	Description
Graph		Determines the orientation and positioning of job nodes in the Flow Diagram.
	Graph Placement	The combination box allows the user to specify **Parent on the Left**, **Parent in the Middle**, or **Parent on the Right** screen display options for the parent job in the Flow Diagram. The default is **Parent in the Middle**.
	Maximize Downward Flow	Check mark indicates that the Flow Diagram is displayed as much as possible in vertical alignment rather than in horizontal alignment.
	Minimize Graph Width	Check mark indicates that the Flow Diagram accommodates the available screen space provided.
Zoom Level		
	Start Zoom Level	Determines the default percentage of magnification of nodes displayed in Flow Diagram view when viewing a new network.Valid values are 10 through 400.

Flowdiagram – Nodes panel

The Flowdiagram Nodes panel (Figure 75) contains node settings for the Flow Diagram view. These settings are described in Table 78. For more information about the Flow Diagram, see "Understanding the Work Area, its views, and components" on page 48.

Figure 75 Flowdiagram – Nodes panel

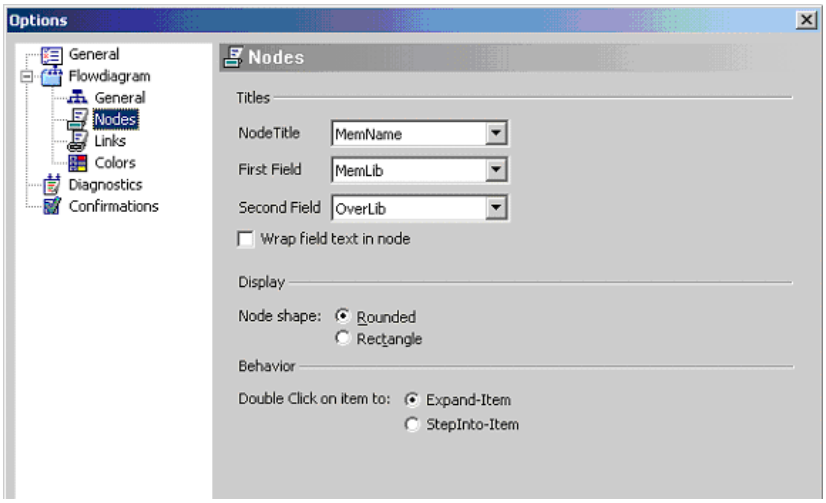


Table 78 Flowdiagram – Nodes panel

Area	Field	Description
Titles		Determines the information to be displayed in Flow Diagram job nodes.
	Node Title	Select the information to be displayed in the title bar of the node. Default: Mem**Name** **Note:** If JOB_NAME / MEMNAME is selected for: ■ MVS jobs —Mem Name is displayed ■ other jobs — Job Name is displayed
	First Field	Select the information to be displayed in the first field of the node body. Default: **CONTROL-M Name**
	Second Field	Select the information to be displayed in the second field of the node body. Default: **CONTROL-M Name**
	Wrap field text in node	Check this box if the text of fields in the job node should wrap to the next line. If not selected, the fields are truncated if necessary.
Display		
	Node shape	Indicates the shape for nodes in the Flow Diagram. Select one of the following: ■ **Rounded** — displays nodes with rounded corners. ■ **Rectangle** — displays nodes with square corners.
Behavior		
	Double Click Action	Indicates what function should be performed when a node is double-clicked in the Flow Diagram. Select either of the following. ■ **Expand-item** — Expand or Collapse function. Expands the selected node to display levels lower than the current selected node, or collapses the selected node to hide all lower levels. **Note:** This option is not available when condition nodes are displayed. ■ **StepInto-Item** — Step In function. Changes the Flow Diagram to display nodes one level lower than the current selected node. For more information, see the description of Step In / Step Out in the *CONTROL-M/Enterprise Manager User Guide.*

Flowdiagram – Links panel

The Flowdiagram Links panel (Figure 76) contains link settings for the CONTROL-M Flow Diagram view. These settings are described in Table 79. For more information about the Flow Diagram, see "Understanding the Work Area, its views, and components" on page 48.

Figure 76 Flowdiagram – Links panel

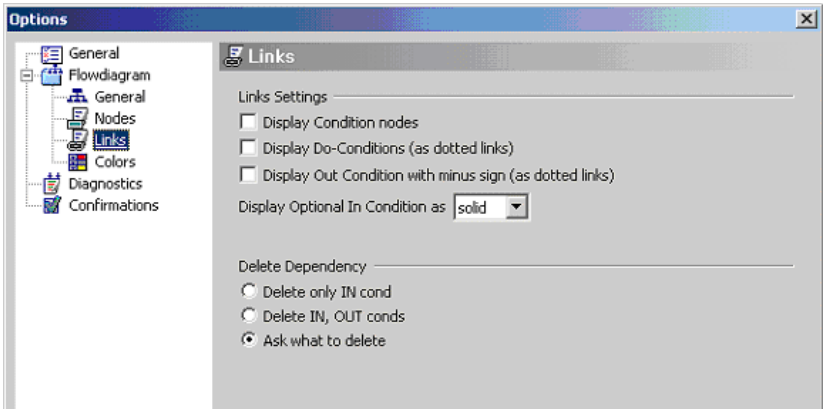


Table 79 Flowdiagram – Links panel

Area	Field	Description
Link Settings		Determines the information to be displayed in Flow Diagram job nodes.
	Display Condition nodes	When selected, indicates that condition nodes should be displayed in the FlowDiagram.
	Display Do-Conditions (as dotted links)	Check this box if conditions created using the **Do Condition** parameter should be displayed. The link is indicated with dotted lines.
	Display Out Conditions with minus sign (as dotted links)	Check this box if **Out Conditions** that get deleted should be displayed. The link is indicated with dotted lines.
	Display Optional In Condition as	Determines whether Optional In conditions (for example, two In conditions separated by an OR operator) will be displayed with solid or dotted lines.
Delete Dependency		Indicates what action the Delete Dependency feature performs. For more information, see "Deleting dependencies" on page 84.
	Delete only IN cond	Deletes the In condition when **Delete Dependency** is selected from a condition line popup menu.
	Delete IN, OUT conds	Deletes both the In condition and the Out condition when **Delete Dependency** is selected from a condition line popup menu.
	Ask what to delete	Displays the **Delete Dependency** dialog box. Default.

Flowdiagram – Colors panel

The Flowdiagram Colors panel (Figure 77) contains color settings for the CONTROL-M Flow Diagram view. These settings are described in Table 80. For more information about the Flow Diagram, see "Understanding the Work Area, its views, and components" on page 48.

Figure 77 Flowdiagram – Colors panel

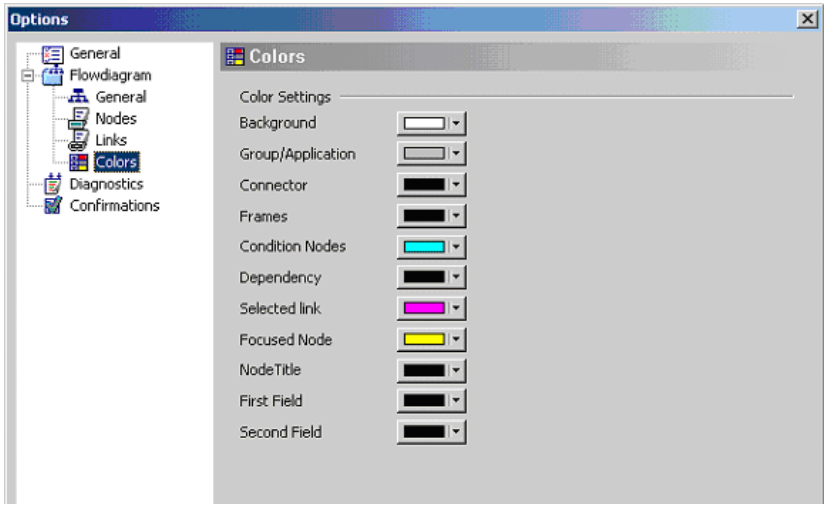


Table 80 Flowdiagram – Colors panel

Area	Field	Description
Color Settings		Determines the colors to be used for displaying the different elements of the Flow Diagram.
	Background	Color for the Flow Diagram background.
	Group/Application	Color for all high-level nodes in the hierarchy.
	Connector	Color for In / Out condition triangles.
	Frames	Color for frames of nodes in Flow Diagram view and in Net Overview.
	Condition Nodes	Color for condition nodes.
	Dependency	Color for links (unselected).
	Selected Link	Color for a link that has been selected.
	Focused Item	Color of the currently focused item.
	Node Title	Color for the node title.
	First Field	Color for the first field displayed in the node.
	Second Field	Color for the second field displayed in the node.

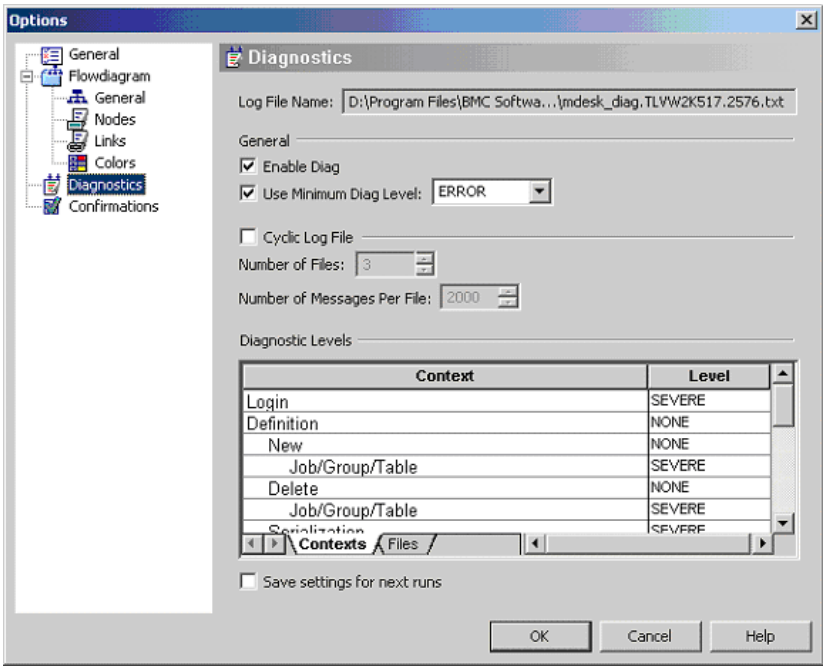
Flowdiagram – Diagnostics panel

The Flowdiagram Diagnostics panel (Figure 78) helps troubleshoot technical problems with CONTROL-M/Desktop by printing diagnostics at the selected severity levels into a log file. The log file should then be sent to BMC Software Customer Support. The settings in the Diagnostic panel are described in Figure 78.

NOTE

Use this panel only when instructed by BMC Software Customer Support. Your technical support representative will notify you which fields to change.

Figure 78 Flowdiagram – Diagnostics panel



NOTE

The changes to the settings take effect immediately, except for changes made to the Cyclic Log File field(s). Changes to Cyclic Log File field settings take affect the next time the specified CONTROL-M/Desktop application files are run.

Flowdiagram – Confirmations panel

Table 81 Flowdiagram – Diagnostic panel fields (Part 1 of 2)

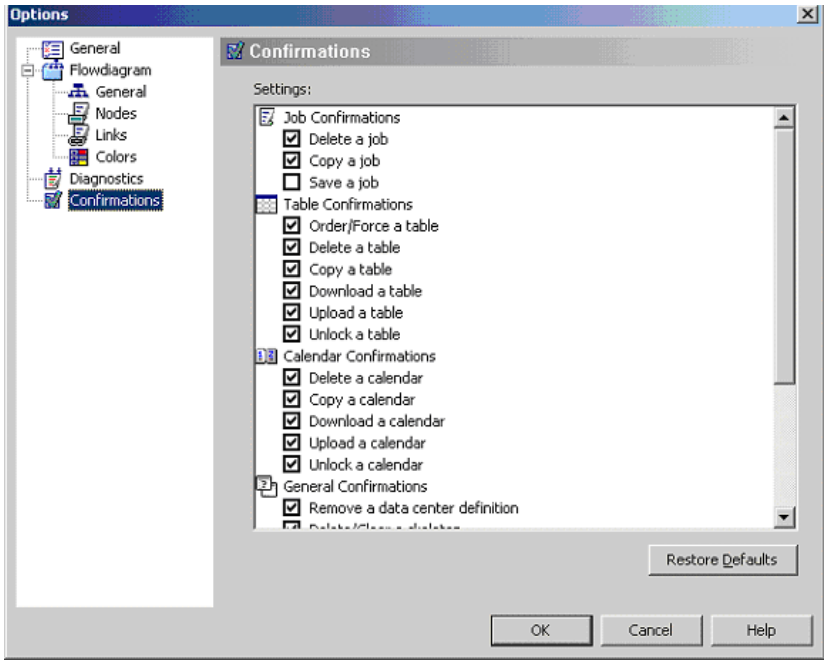
Area	Field	Description	
	Log File Name	Full name and path of the log file to which diagnostics should be printed. For display purposes only.	
General			
	Enable Diag	When selected, diagnostics are printed to a log file. Default: Selected.	
	Use Minimum Diag Level	If this is selected, all diagnostics are printed to the log at the selected diagnostic level or higher, even if diagnostic levels specified in the Diagnostic Levels fields (see below) are lower than the value specified here. Values can be selected from the list, or entered manually (keyword or numeric code). Default: 1 ERROR. Valid values are:	
		0 SEVERE	Only severe issues (crashes).
		1 ERROR	Error messages (CORBA exceptions, errors that can cause the application to malfunction or crash at a later time). Default.
		2 WARNING	Warning messages (unexpected events that do not stop the application but may limit functionality.
		3 (General)	General events.
		4 INFO	Information about the basic functionality of the application.
		5 DEBUG	More detailed information including the steps of an event, parameters, etc.
		6 FNC_ENTER	Every entrance to a function / method.
		7 FNC_EXIT	Every exit from a function / method.
Cyclic Log File		When checked, diagnostics are printed to a set of log files (instead of one). Default: Not checked.	

Table 81 Flowdiagram – Diagnostic panel fields (Part 2 of 2)

Area	Field	Description
	Number of Files	The maximum number of files to which diagnostics are printed. Valid values: 1-300. Default: 1.
	Number of Messages Per File	The maximum number of messages that can be written to each cyclic log file. Valid values: 200-10000. Default: 200.
		If more diagnostics are generated than fit in the defined number of cyclic log files, CONTROL-M / Desktop writes over the existing log files, starting with the first in the set. Changes to these fields take affect the next time the specified CONTROL-M / Desktop application files are run (not immediately).
Diagnostic Levels		Individual diagnostic level settings for each file or context (procedure). See the **Use Minimum Diag Leve**l field for valid values.
	Files tab	Diagnostics are generated on a file basis, at the level specified next to each file name.
	Contexts tab	Diagnostics are generated on a procedural basis, at the level specified next to each context (procedure). Procedures listed in the Contexts tab can span several files or sub-procedures. When you change the level of a procedure, CONTROL-M / Desktop automatically changes the level of any sub-procedures.
Save settings for next run		If selected, the diagnostic settings are saved as a default for future CONTROL-M / Desktop sessions. Otherwise, the settings take effect for this CONTROL-M / Desktop session only.

The Confirmations panel (Figure 79) determines which confirmation requests and warnings should be displayed for various job, table, and calendar actions.

Figure 79 Flowdiagram – Confirmations panel



Confirmation options are divided into the following sections:

- Job Confirmations

  Select or deselect the job actions for which you want a confirmation dialog box to display before CONTROL-M/Desktop performs the job action.

- Table Confirmations

  Select or deselect the actions for which you want a confirmation dialog box to display before CONTROL-M/Desktop performs the table action.

- Calendar Confirmations

  Select or deselect the actions for which you want a confirmation dialog box to display before CONTROL-M/Desktop performs the calendar action.

- General Confirmations

To set confirmations

1 Select or deselect the general confirmations that you want displayed.

2 To reassign the originally provided default settings, click **Restore Defaults**.

Viewing toolbars

The buttons in the CONTROL-M / Desktop window are arranged in several different toolbars that can be displayed or not displayed depending on your preference.

To modify the Toolbar display:

1 Choose **Edit => Toolbars**.

The Toolbars dialog box (Figure 80) is displayed.

Figure 80 Toolbars dialog box

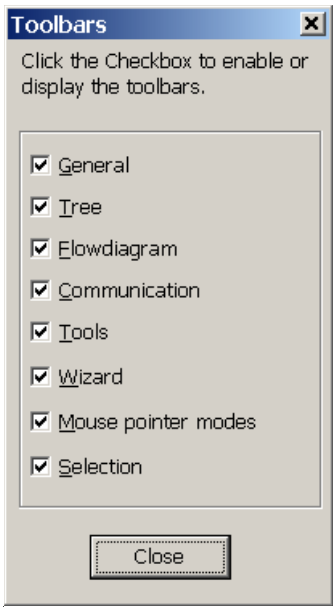


Table 82 Toolbar contents (Part 1 of 2)

Toolbar	Contents
General	New, Open, Save, Copy, New Job, Delete Job, Copy Tags, and New Scheduling Group
Tree	CONTROL-M Hierarchy, and Application Hierarchy.
Flowdiagram	Flowdiagram Zoom, Zoom In, Zoom Out, Arrange All Items, Step In, and Step Out.
Communication	Load, Write, Scheduling Table Manager, Edit Calendars, Connect, and Disconnect
Tools	Current Skeleton list, Edit Skeleton, Edit Collection, Mass Job Creation, Mass Update, and Validity Check.
Wizard	Starts the Wizard.

Table 82 Toolbar contents (Part 2 of 2)

Toolbar	Contents
Mouse pointer modes	Definition mode, Selection mode
Selection	First, Next, Previous, Last

2 Select the toolbars to be displayed. Table 82 describes the contents of each toolbar.

3 Click **Close**.

CONTROL-M/Desktop menus

This appendix provides a comprehensive listing of all options available from the CONTROL-M/Desktop menu bar.

All CONTROL-M/Desktop options can be chosen from the toolbar. The menu options are described in the following tables.

Table 83 CONTROL-M/Desktop File Menu options

Options	Description
New	Creates a new draft.
Open	Opens an existing draft.
Close	Closes the current draft.
Save	Saves the current draft.
Save As	Saves the current draft with a file name that you specify.
Load jobs from CONTROL-M/EM	Loads jobs from CONTROL-M/EM into the current draft in either online or local load mode.
<Recent File>	Lists shortcuts to drafts recently edited.
Print	Prints the current draft.
Print Preview	Displays a preview of the current draft.
Exit	Closes CONTROL-M/Desktop.

Table 84 CONTROL-M/Desktop Edit Menu options

Option	Description	
CONTROL-M definitions	Opens the **CONTROL-M definitions** window, from which you can register the CONTROL-M installations in your network.	
Job	Submenu containing the options for managing jobs.	
	New	Creates a job using the current skeleton.
	Delete	Deletes the selected job.
	Copy	Creates a copy of the selected job.
	Edit and Copy	Displays the Job Editing form for you to edit, and then creates a copy of the selected job as edited.
	Edit	Displays the Job Editing form for you to edit the selected job.
	Browse	Allows you to browse to a different job.
Scheduling Group	Submenu containing the options for managing group scheduling tables.	
	New	Creates a new group scheduling table
	Delete	Deletes the selected group scheduling table
	Edit	Opens the Group Editing form.
	Copy Tag	Creates a copy of the selected Schedule tag.
	Browse	Allows you to browse to a different job in the group.
Find/Select Jobs	Opens the Find a Job dialog box. Use the Find a Job dialog box to locate one or more jobs in the current draft.	
Scheduling Tables	Submenu containing the options for managing and writing scheduling tables.	
	Scheduling Table Manager	Opens the Scheduling Table Manager, from which you can create, delete, and manage the contents of scheduling tables in the CONTROL-M/EM database and the CONTROL-M/Server database.
	Write to CONTROL-M/EM	Exports scheduling tables from the current draft to the CONTROL-M/EM database. **Note**: You can export new scheduling tables when the target CONTROL-M is active or unavailable.
Calendars Manager	Opens the Calendar Manager window.	

Table 85 CONTROL-M/Desktop View Menu options

Option	Description	
Flowdiagram	Displays the Flow Diagram in the Draft window.	
List/Job Editing Form	Displays the List view in the Draft window.	
Hierarchy	Changes the order of displayed information between **Application => Group => Job** and **Data Center => Scheduling table => Job**.	
Name	Arranges the nodes in the Draft window according to name.	
Big Icon	Displays large nodes.	
Partial Details	Displays information about each displayed node.	
Toggle Selection	Displays the following suboptions for navigating through selected nodes, making the target node the focus:	
	First	Jumps to the first selected node.
	Next	Jumps to the next selected node.
	Previous	Jumps to the previous selected node.
	Last	Jumps to the last selected node.
Select All	Selects all displayed nodes in the Draft window.	
Validity Checks Error Messages	Displays the **Validity Checks Error Messages** window, from which you can trouble shoot problems with your job and table definitions.	
Table Action Report	Displays the Table Actions Report window. This window can be hidden when it is waiting for pending information.	
Calendar Action Report	Displays the Calendar Actions Report window. This window can be hidden when it is waiting for pending information.	
Toolbars	Displays the **Toolbars** dialog box, from which you can select which toolbars to display.	
Status Bar	Displays / hides the Status Bar.	

Table 86 CONTROL-M/Desktop Tools Menu options (Part 1 of 2)

Option	Description
Mass Create	Displays the **Mass Create** dialog box, from which multiple jobs, based on the same skeleton (template), are created.
Mass Update	Displays the **Mass Update** dialog box, from which modifications can be applied to multiple jobs.
Validity Checks	Performs validity checks on the jobs in the current draft. The results are displayed in the **Validity Checks Error Messages** window.
Skeleton	Displays the **Skeleton Editor** window, from which you can create and modify job skeletons (templates).
Collection	Displays the **Collection** window, from which you can modify the contents of the current collection.
Neighborhood	Opens the Neighborhood dialog box, which you can use to identify jobs according to their dependent relationships.

Table 86 CONTROL-M/Desktop Tools Menu options (Part 2 of 2)

Option	Description
Import Application Forms	Imports a Job Editing form panel for the Job Editing form. Using this panel, you can create jobs for supported external applications (such as SAP and Microsoft Windows 2000). Import the forms once on each CONTROL-M / Desktop installation in your network from which you want to create jobs to run on the specific application.
Change Password	Enables you to change your password.
Options	Displays the **Options** dialog box.

Table 87 CONTROL-M/Desktop Communication Menu options

Option	Description
Connection Properties	Displays the current connection properties.
Connect to GUI Server	Establishes communication with the GUI Server.
Disconnect from GUI Server	Ends communication with the GUI Server.
Connect with Different Properties	Enables you to change your connection properties and reconnect to a GUI Server.

Table 88 CONTROL-M/Desktop Window Menu options

Option	Description
New Window	Opens a new window.
Cascade	Cascades all open windows.
Tiles	Tiles all open windows.
Arrange Icons	Arranges icons in the CONTROL-M / Desktop window.
Split	Resizes the Flow Diagram and Net Overview by moving the split between them.
<List of Windows>	Lists currently open windows.

Table 89 CONTROL-M/Desktop Help Menu options

Option	Description
Wizard	Starts the CONTROL-M Job Definition Wizard.
Tutorial	Displays the CONTROL-M / Enterprise Manager tutorial. this tutorial explains the steps necessary for getting started with CONTROL-M / Desktop.
Help Index	Displays CONTROL-M / Desktop Help.
About CONTROL-M/Desktop	Displays identifying information about your version of CONTROL-M / Desktop.

Managing logon connections to CONTROL-M/EM

This appendix provides a comprehensive listing of all options available from the CONTROL-M/Desktop menu bar.

Logging on to CONTROL-M/EM

Each time you upload or download scheduling tables or calendars, you use a communication channel with CONTROL-M/EM. You can maintain an open connection all the time, initiate communication each time data is transferred, or close the connection following the transfer.

When you log on to CONTROL-M/EM, you are prompted for your user name, password and the name of the GUI Server to which you are connecting. These settings remain in effect until you close CONTROL-M/Desktop or you establish a connection with different properties.

TIP

To learn how to establish a connection with different properties, see "Connecting with different connection properties" on page 266.

The following connection modes are available:

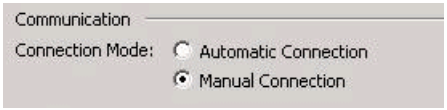
- **Automatic connection**
  CONTROL-M/Desktop manages your connection with the GUI Server. Every time you perform an action requiring communication with the GUI Server (such as uploading a scheduling table), CONTROL-M/Desktop establishes a connection with the GUI Server you specified when you logged on. When the action is complete (for example, the table is finished uploading), the connection is terminated by CONTROL-M/Desktop. For more information, see "Communication" on page 246.

- **Manual connection**
  You manage your connection with the GUI Server. If an action requiring communication is requested, and no connection is active, you are informed that the requested action requires a connection. Once a connection is established, it remains on until you log off of CONTROL-M/Desktop or terminate the connection manually. You can manually reestablish a terminated connection. For more information, see "Manual communication management" on page 265.

To choose a communication mode:

1 Choose **Tools => Options**. The General panel of the Options dialog box is displayed.

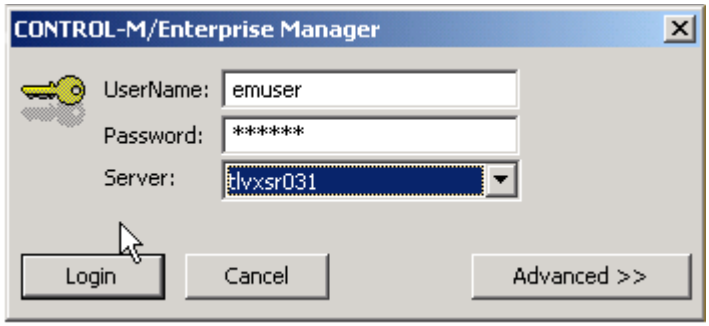
2 Select the required connection mode.



3 Click **OK**.

To log on to CONTROL-M/EM:

1 Click , or select **Communication => Connect to GUI Server**. The CONTROL-M/Enterprise Manager logon dialog box is displayed.



2 Specify your user name and password.

3 The name of the last accessed CONTROL-M/EM GUI Server is automatically displayed in the Server list box. The list contains all GUI Servers registered with the current CORBA Naming Service. Select the GUI Server you want.

NOTE

The first time a user connects, the default GUI Server specified during installation is displayed. To change the GUI Server, see page 266.

4 Click **Login**. Communication is established.

NOTE

Usually the connection with CONTROL-M/EM is broken when you close the Scheduling Table Manager window. To establish a connection that remains open until you close it manually, use the Connect feature described in "Manual communication management.".

Manual communication management

A connection is established only after you specifically request it. This connection remains up until you either click  or until you choose **Communication => Disconnect from GUI Server**.

As long as the connection remains, you can freely upload and download scheduling tables and Calendars without having to reestablish communication. This enables you to perform multiple actions that require communication with CONTROL-M/EM without having to reconnect to the GUI Server for each action.

If you request an action that requires a connection, and communication is not currently established with the GUI Server, you are informed of the situation. Establish a connection and then retry the request.

The **Connect**  and **Disconnect**  functions are available only when the Manual Connection mode is chosen in the General panel of the Options dialog box.

TIP

You can obtain information about the current connection status at any time using the **Connection Properties** feature described in "Displaying connection properties" on page 268.

Disconnecting from CONTROL-M/EM

To disconnect from CONTROL-M/EM:

1 Click  . The **Disconnect** icon is replaced by  . The connection is broken.

-or-

Choose **Communication => Disconnect from GUI Server**.

Connecting with different connection properties

After you start CONTROL-M / Desktop, it is not necessary to close and restart CONTROL-M / Desktop to log on to a different GUI Server or to log on as a different user.

Instead, you can establish communication with properties different from those with which you initially logged on using **Connect with Different Properties**.

To log on to a different GUI Server, you must make some additional changes to the communication properties. These changes are described in the following procedure.

To log on to a different GUI Server

1 Click  , or choose **Communication => Connect with Different Properties**. The Communication Login dialog box displayed.

2 Enter your user name and your password.

3 Select a different GUI Server from the **Server** drop-down list box.

4 To log on to a GUI Server that is registered with a different Naming Service, perform the steps described on page 267.

5 Click **Login**. Communication is established with the new GUI Server.

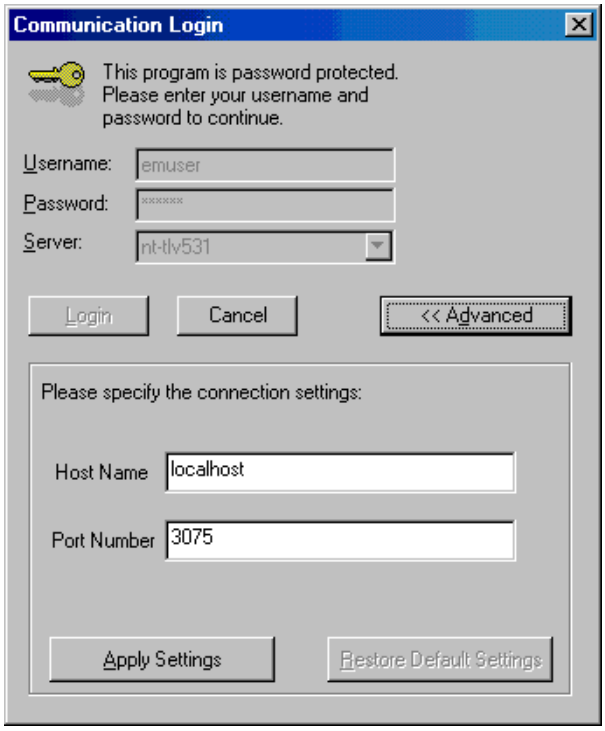
To log on to a GUI Server with a different Naming Service

To log on to a GUI Server registered with a different Naming Service, change the logon properties as described in the following procedure. This procedure displays a different list of GUI Servers in the Server list box in the Communication Login dialog box.

NOTE

If the IP address of the computer running CORBA services has changed, the CORBA Naming Service fails to start up the next time CORBA is activated. The CORBA server must be reconfigured as described in the "CORBA Configuration" chapter of the *CONTROL-M/Enterprise Manager Administrator Guide*.

1 In the Communication Login dialog box, click **Advanced**. The Communication Login dialog box is redisplayed with additional controls:



2 Enter the name of the CORBA Naming Service host computer in the **Host Name** text box.

3 Enter the port number on the CORBA Naming Service host computer in the **Port Number** text box.

4 Click **Apply Settings**. The following occurs:

- The bottom portion of the window is hidden.
- **Login** becomes available.
- The list of all GUI Servers registered with the CORBA Naming Service is updated and becomes available from the Server list box.

NOTE

Click **Restore Default Settings** to enter the CORBA host name and port values that were specified when CONTROL-M/Desktop was installed.

5 Click **Login**. Communication is established using the new properties.

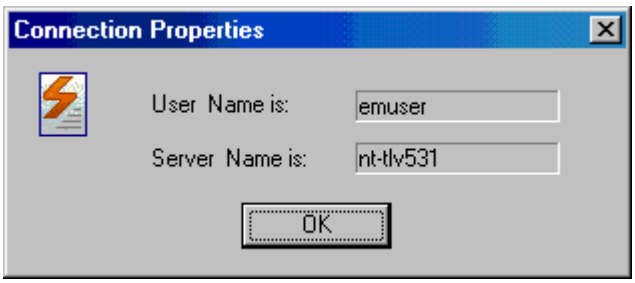
Displaying connection properties

The Connection Properties window displays the name of the user who is currently connected and the name of the server to which that user is connected.

To display connection properties:

1 Choose **Communication => Connection Properties** or click . The Connection Properties dialog box is displayed.

Figure 81 Connection Properties dialog box



2 Click **OK** to close the dialog box.

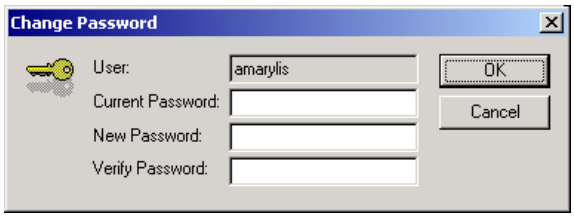
Changing your password

After connecting to the CONTROL-M/EM GUI Server, you can change your password.

To change your password:

1 Choose **Tools => Change Password**. The Change Password dialog box is displayed.

Figure 82 Change Password dialog box



NOTE

The Change Password option is available only if your administrator has set the **UserChangePassword** system parameter to **1**.

2 Enter your current password in the **Current Password** field.

3 Enter your new password in the **New Password** field. (Your keystrokes appear as asterisks as you type them.)

4 Re-enter your new password in the **Verify Password** field. (Your keystrokes appear as asterisks as you type them.)

5 Click **OK** to confirm your new password.

6 Log off all CONTROL-M/EM components for the change to take effect.

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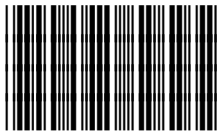

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